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Test-25

Test Booklet Series

C

GENERAL STUDIES (P) 2022 – Test – 3494

Time Allowed: Two Hours

Maximum Marks: 200

2022

FULL LENGTH TEST (COMPLETE SYLLABUS

Indian Constitution, Political System and Governance

Geography + History of India

Indian Economy & Social

Development + Ecology & Environment + General Science

+ Current Affairs

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1. Which of the following statements is correct with reference to the Fundamental Rights?

(a) Religious instruction in State-owned educational institutions, must not be imposed upon people of other religion without their consent.

(b) Right to move out of the country and right to come back to the country is dealt by Article 19.

(c) 'Bandhs' do not fall within the Fundamental right of speech.

(d) The National Awards can be used as suffixes or prefixes to the names of awardees.

2. Which of the following statements is correct about the Quit India Movement?

(a) To suppress Quit India Movement, martial law was not imposed by the Britishers.

(b) Gandhiji refused to condemn the violence of the people.

(c) It initially started as a rural revolt, marked by boycotts and picketing.

(d) It is also called as 'August Revolution'.

3. In the context of plant species, 'Dieback' and 'Staghead' refer to:

(a) progressive death of twigs and branches generally starting at the tips.

(b) restricted growth of axial roots and shoots in plants.

(c) Annual browning and fall of leaves in deciduous plant species.

(d) Inability of plant species to propagate their seeds and reproduce.

4. Consider the following statements regarding Viral Vector-based Vaccines:

1. Viral Vector Vaccines use a weakened form of the deadly virus to create an immune response.
2. Immune response involves both B cells and T cells.
3. Previous exposure to the vector could reduce the effectiveness of the Vaccine.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 only

(d) 1 and 3 only

5. Which of the following statements are correct with reference to the Amravati school of architecture?

1. It flourished during the Satvahana period.
2. There is prominence of human figures rather than to figures drawn from nature.
3. They mainly used white-spotted red sandstone.

Select the correct answer using the code given below.

(a) 1 and 3 only

(b) 2 and 3 only

(c) 1 only

(d) 1 and 2 only

6. It is a situation in an economy that results out of a process of wage and price interaction as wages press prices up and prices pull wages up. It was a plausible cause of inflation for the first time in the US economy in the year 1935.

Which of the following is best described in the passage given above?

(a) Inflation Accounting

(b) Inflation Premium

(c) Inflation Spiral

(d) Inflation Tax

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7. Recently Mission Lucy has been launched by NASA to study Trojan asteroids. In the context of Trojan asteroids, consider the following statements:

1. Trojan asteroids are small bodies that are considered as remnants of the early solar system.
2. The Trojans orbit around the sun in tandem with the Jupiter

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

8. With reference to the election disputes, consider the following statements:

1. To decide an election petition related to Panchayat is vested in the High Court.
2. Election disputes related to either House of Parliament or State Legislature can be determined by the Administrative Tribunals set up by law.
3. The election dispute related to the Speaker of Lok Sabha is determined by High Court.

Which of the statements given above are correct?

(a) 1, 2 and 3
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1 and 2 only

9. Fiscal Slippage may result into which of the following?

1. Large government borrowings
2. Lower interest rates
3. Crowding out of Private sector

Select the correct answer using the code given below.

(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

10. With reference to the National Savings Certificate, consider the following statements:

1. It is a savings scheme backed by the government that can be purchased from any general post office in India.
2. It provides guaranteed returns and tax rebates as per Income Tax Act, 1961.
3. The National Savings certificate may be pledged or transferred as securities to the President of India.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

11. Consider the following statements with regards to the Terai Arc Landscape (TAL):

1. It stretches from the river Yamuna in the west and the river Bhagmati in the east.
2. It is home to the Bengal Tiger, the One-Horned Rhino and the Asian Elephant.
3. Rajaji National Park is a part of this landscape.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

12. Consider the following statements with reference to the Inter-State River Water Disputes Act, 1956:

1. It provides for the establishment of River Boards.
2. The Chairman and members of the Water Dispute Tribunals are nominated by the Chief Justice of India.
3. In case of a dispute, a State can directly approach the Tribunal.

Which of the statements given above is/are correct?

(a) 1 and 3 only
(b) 2 only
(c) 1 only
(d) 2 and 3 only

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13. Consider the following statements regarding Turtle Survival Alliance (TSA):

1. It was formed as a partnership for sustainable management of freshwater turtles between WWF and IUCN.
2. It aims at restoring populations of turtles as well as tortoises.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

14. Consider the following statements regarding bhakti saint Kabir:

1. He was a proponent of nirgun bhakti.
2. His teachings are compiled in "Bijak".
3. He considered asceticism and book knowledge important for knowledge of God.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 2 only
(c) 1 and 3 only
(d) 2 and 3 only

15. In the context of Jallianwala Bagh, arrange the following in the chronological order of happening.

1. Passage of Rowlatt Act.
2. Arrest of Dr. Satyapal and Dr. Saifuddin Kitchlew.
3. Formation of Disorders Inquiry Committee.
4. Tagore renounced his knighthood.

Select the correct answer from the code given below.

(a) 1-4-2-3
(b) 2-1-3-4
(c) 1-2-4-3
(d) 2-1-4-3

16. In the context of Magnetars, consider the following statements:

1. Magnetars are a type of neutron stars with magnetic field stronger than that of the Earth.
2. Alfven Waves are created due to the instabilities caused inside a magnetar.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

17. Recently, the rupee has been depreciating against the dollar and is one of the biggest losers among the emerging market currencies. In this context, which of the following could be reasons for the depreciation of the Indian Rupee against US dollars?

1. Increase in interest rates by the Central Bank of USA.
2. Increase in foreign portfolio investments in India.
3. RBI purchasing G-Secs under Government Securities Acquisition Programme.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

18. In the context of the history of planning in India, who among the following gave the Sarvodaya Plan in 1950?

(a) Vinoba Bhave
(b) Dr. B.R Ambedkar
(c) Jawaharlal Nehru
(d) Jaiprakash Narayan

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19. If an opaque object on the path of light becomes very small, light has a tendency to bend around it and not walk in a straight line. This phenomenon is known as

(a) total internal reflection

(b) diffraction

(c) reflection

(d) refraction

20. Consider the following pairs:

Mountain Peak		***State***
1. Anaimudi	:	Kerala
2. Nanda Devi	:	Uttarakhand
3. Dodabetta	:	Tamil Nadu

Which of the pairs given above are correctly matched?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

21. Consider the following pairs:

Report/Index		***Released by***
1. Global Innovation Index	:	WIPO
2. Global Girlhood Report	:	UN Women
3. State of the Education Report for India	:	UNESCO

Which of the pairs given above is/are correctly matched?

(a) 2 and 3 only

(b) 1, 2 and 3

(c) 1 and 3 only

(d) 2 only

22. The Representation of People Act, 1950 provides for the criteria for the ordinary residence of candidates. Which of the following statements is/are ***not*** correct regarding the criteria of ordinary residents?

1. Any MP or MLA during his term of office will be considered as ordinarily resident in the constituency from where he is elected as a member.
2. Any person serving the armed forces of the Union is considered as ordinarily resident at the place of service.

Select the correct answer using the code given below.

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

23. Which of the following statements is/are correct about the 'Office of Profit'?

1. The power to disqualify an MLA or an MP based on the office of profit lies with the Election Commission of India.
2. It is defined in the Parliament (Prevention of Disqualification) Act, 1959.
3. It seeks to enforce the principle of separation of power between the legislature and the executive.

Select the correct answer using the code given below.

(a) 1 and 3 only

(b) 2 only

(c) 3 only

(d) 2 and 3 only

24. Which of the following statements with regards to the Trench Farming is/are correct?

1. It is a technique of growing vegetables during extreme winters.
2. It harnesses solar heat to create suitable climatic conditions for growth of vegetables.

Select the correct answer using the code given below.

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

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25. Consider the following statements regarding False Malabar Gliding Frog:

1. It is endemic to the Western Ghats.
2. It is listed as critically endangered on the IUCN Red List of threatened species.
3. The female creates foam nests on leaves for laying the eggs which are then fertilized by the male frog.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

26. Which of the following operational criteria are used by IMD for declaring the withdrawal of monsoon from extreme north-western parts of India?

1. Cessation of rainfall activity over the area for continuous 5 days.
2. Establishment of a cyclone in the lower troposphere.
3. Considerable reduction in moisture content.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

27. Consider the following statements about the Foreign Contribution (Regulation) Act, 2010:

1. It prohibits the editor of a newspaper to accept funds from any foreign company.
2. Foreign contributions received by a person can not be transferred to any other person.
3. It must be received only in an account designated by the bank as an FCRA account in specified branches of the State Bank of India, New Delhi.

Which of the statements given above are correct?

(a) 1, 2 and 3
(b) 1 and 3 only
(c) 2 only
(d) 3 only

28. Which of the following factors may account for an increase in frothing in the Yamuna River?

1. Presence of phosphates and surfactants in river water.
2. Less amount of water during the winter season.
3. Turbulence or fall of river water from barrages.
4. Decomposing vegetation and presence of filamentous bacteria.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2, 3 and 4 only
(c) 1, 3 and 4 only
(d) 1, 2, 3 and 4

29. Consider the following statements regarding Aichi Targets for Biodiversity:

1. They are a part of the Strategic Plan for Biodiversity for the 2011-2020 period framed under the Convention on Biological Diversity.
2. They were adopted at the United Nations Conference on Environment and Development (UNCED).
3. At least five countries of the world have fully achieved all the targets.

Which of the statements given above is/are correct?

(a) 1, 2 and 3
(b) 1 only
(c) 1 and 3 only
(d) 3 only

30. Consider the following statements about the Chamber of Princes:

1. It was inaugurated by Duke of Connaught at Red Fort, Delhi.
2. All the states which enjoyed limited legislative and jurisdictional powers were directly represented.
3. It was only an advisory and consultative body.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

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31. Consider the following statements with reference to Montreux Record under Ramsar Convention:

1. It is a register of wetland sites where changes in ecological character have occurred as a result of human interference.
2. Keoladeo National Park and Chilka Lake are the two wetlands of India currently placed in Montreux Record.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

32. In the context of the Satavahanas, consider the following statements:

1. They claimed to be Buddhists and promoted Mahayana form of Buddhism on a wide scale.
2. The official language of Satavahanas was Sanskrit.
3. The Satavahana social structure reflected traces of matrilineality.
4. Most of the coins in the Satavahana dynasty were die-struck.

Which of the statements given above are correct?

(a) 1, 2 and 3 only
(b) 1 and 3 only
(c) 1, 2 and 4 only
(d) 3 and 4 only

33. With reference to the status of 'developing countries' in the World Trade Organisation (WTO), consider the following statements:

1. WTO defines a country as developing based on a low Human Development Index (HDI) relative to other countries.
2. The status of 'developing countries' can be challenged by other member countries of WTO.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

34. Which of the following are the objectives laid down in the National Forest Policy, 1988 of India?

1. Checking soil erosion and denudation in the catchment areas of rivers and lakes.
2. Checking the extension of sand-dunes in the desert areas of Rajasthan and coastal tracts.
3. Encouraging the involvement of women to achieve the objectives and minimize pressure on existing forests.
4. Meeting the requirements of fuel-wood, fodder and minor forest produce of the rural and tribal populations.

Select the correct answer using the code given below.

(a) 1 and 4 only
(b) 2, 3 and 4 only
(c) 1, 2 and 3 only
(d) 1, 2, 3 and 4

35. This school of philosophy is the oldest of the six systems. According to it, the presence of divine agency is not essential to the creation of the world. The world owes its creation and evolution more to Nature or Prakriti than to God. Later, in addition to Prakriti, Purusha or spirit was introduced as an element in its system, and the creation of the world was attributed to both.

Which of the following Schools of Philosophy is being described in the above passage?

(a) Yoga
(b) Nyaya
(c) Samkhya
(d) Vaisheshika

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36. The Oath or Affirmations of which of the following office bearers are mentioned in the Third Schedule of Indian Constitution?

1. President of India
2. Vice-President of India
3. Speaker of Lok Sabha
4. Union Minister of State
5. Member of Parliament
6. Comptroller and Auditor General of India
7. Judges of the Supreme Court and High Court

Select the correct answer using the code given below.

(a) 1, 2, 5, 6 and 7 only
(b) 3, 5, 6 and 7 only
(c) 1, 2, 3 and 4 only
(d) 4, 5, 6 and 7 only

37. Consider the following statements regarding Jute sector in India:

1. India is the world's biggest producer of jute.
2. For the jute year 2020-21, 100% of the foodgrains and sugar are required to be mandatorily packed in jute bags.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

38. With reference to the Emissions Gap Report, 2021, consider the following statements:

1. It is jointly published by Intergovernmental Panel on Climate Change and World Wide Fund for Nature.
2. It assesses the gap between anticipated emissions and levels consistent with the Paris Agreement goals of limiting global warming.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

39. The State Reorganisation Act, 1956 contains provisions related to which of the following matters?

1. Establishment of Zonal Council
2. Inter-state river water disputes
3. All India Services
4. High Courts

Select the correct answer using the code given below.

(a) 1, 2, 3 and 4
(b) 1, 3 and 4 only
(c) 1 only
(d) 2 and 4 only

40. Consider the following statements regarding the jurisdiction of the Supreme Court (SC):

1. A dispute arising out of any pre-Constitutional treaty, agreement, and engagement comes under Original Jurisdiction.
2. Cases involving interpretation of the Constitution in civil and criminal matters come under the Appellate Jurisdiction.
3. Appeal by Special Leave is available in matters of civil and criminal cases but not in constitutional.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 only
(d) 2 and 3 only

41. In the context of recent labour reforms, which of the following statements is correct?

(a) An establishment having at least 300 workers requires prior permission of the Government before closure and lay-off.
(b) In case of fixed term employee, notice has to be given for retrenchment.
(c) Threshold age for a person to work in mines is 14 years.
(d) e-SHRAM Portal is a centralized database of organized and unorganized workers.

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42. Which of the following are examples of plantation crops in India?

1. Coffee
2. Rubber
3. Arecanut
4. Cashew

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2, 3 and 4
(c) 3 and 4 only
(d) 1, 2, 3 and 4

43. Consider the following statements:

1. Prokaryotic cells are generally smaller than eukaryotic cells.
2. Unlike eukaryotic cells, prokaryotic cells do not have chromosomes.
3. Membrane-bound cell organelles are present in prokaryotic cells.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3 only
(c) 3 only
(d) 1 and 2 only

44. Consider the following statements regarding Tanjore paintings:

1. The painting is characterised by bold drawing and the use of pure and brilliant colours.
2. The style is decorative and is marked by the use of semi-precious stones.
3. Tanjore Painting grew under the Maratha influence.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

45. Consider the following statements about the Witness Protection Scheme:

1. It covers only those witnesses whose own life or the lives of whose family members are in danger.
2. The Witness Protection Fund is operated by the Ministry of Home under the State/UT Government.
3. It is enforceable in all States and Union Territories of India.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 2 only

46. The NHB (National Housing Bank) RESIDEX has been revamped to have larger scope and wider geographical coverage. In this context, which of the following indices are included in the NHB RESIDEX?

1. Housing price indices (HPI)
2. Land price indices (LPI)
3. Building materials price indices (BMPI)
4. Housing rental index (HRI)

Select the correct answer using the code given below.

(a) 1 and 3 only
(b) 2 and 4 only
(c) 1 and 4 only
(d) 1, 2, 3 and 4

47. Noble Prize in Chemistry has been awarded for the development of Organocatalysis. In this context, consider the following statements:

1. Organic catalysts are environmentally friendly and cheap to produce.
2. Organic catalysts can be used to construct molecules that can capture light in solar cells.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

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48. Consider the following statements regarding the flow of Foreign Direct Investment (FDI) into India :

1. Mauritius is the single largest source of FDI in India.
2. In the last five years FDI has increased continuously in India.
3. FDI is prohibited in sectors such as chit funds and gambling.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) 2 and 3 only
(d) 1 and 3 only

49. Which of the following statements is ***not*** correct about the Governor of a State?

(a) The term of 5 years of office of Governor is mentioned in the Constitution.
(b) The Governor has powers with regards to emergency under Article 352.
(c) The Constitution does not empower the President to exercise any discretionary power where as it authorities Governor for the same.
(d) He must be consulted by President before appointing High Court Judges.

50. Which of the following plant species are included under Schedule VI of the Wild (Life) Protection Act, 1972?

1. Prosopis Julifora
2. Ladies Slipper Orchid
3. Red Vanda

Select the correct answer using the code given below.

(a) 1 and 3 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

51. Consider the following statements with reference to the motions of the earth:

1. The circle of illumination coincides with the axis of earth on the full moon night.
2. On 21st March, the geographic north pole is tilted towards the sun.
3. The speed of the earth's rotation decreases towards the poles.

Which of the statements given above is/are ***not*** correct?

(a) 2 and 3 only
(b) 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

52. Consider the following statements with reference to the election of the President of India:

1. To decide an election petition relating to the election of the President is vested in the Election Commission of India.
2. A person who is neither a candidate nor an elector can not file a suit challenging the validity of the election of the President.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

53. Which of the following statements is correct about the Mahayana sect of Buddhism?

(a) They did not believe in idol or image worship of Buddha.
(b) They believed in 'individual salvation or nirvana' through self discipline and meditation.
(c) They believed in the concept of Vibhajjavada i.e. "teaching of analysis".
(d) They believed in 'ten paramitas or ten great spiritual perfections' to be followed by an individual.

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54. Which of the following is/are the advantages of Space-based internet systems using satellites in Low Earth orbit (LEO) compared to Geostationary Earth orbit (GEO)?

1. Latency in signal transmission is very low for satellites in LEO
2. Serviceable area on Earth by each satellite is more in case of LEO
3. It is easier to establish a transmission link with a satellite in LEO

Select the correct answer using the code given below.

(a) 2 and 3 only
(b) 1 only
(c) 1 and 2 only
(d) 1, 2 and 3

55. Consider the following statements about the revocation of National Emergency:

1. The proclamation of emergency ceases to operate as soon as the circumstances necessitating its proclamation are absent.
2. The President must revoke the proclamation if either House of the Parliament passes a resolution disapproving its continuation.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

56. One of the methods Dalits adopted against untouchability and the caste system before independence was Temple Entry Movements. In this context which of the following pairs is/are correctly matched?

Temple Entry Movement		***Area***
1. Guruvayur Satyagraha	:	Madras
2. Munshiganji Kali Temple Satyagraha	:	Bengal
3. Vaikom Satyagraha (1924-25)	:	Travancore

Select the correct answer using the code given below.

(a) 3 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

57. With reference to Allotropes of carbon, consider the following statements:

1. Diamond structure is formed by hexagonal arrays whereas Graphite has a perfect tetrahedron structure.
2. Diamond is the hardest substance while graphite is smooth and slippery
3. Both the allotropes of carbon have the same chemical properties.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 2 only
(d) 1 and 3 only

58. Which of the following aquatic species are you likely to find in the Beas river of Punjab?

1. Indus River Dolphin
2. Common Carp
3. Humpback Mahseer

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 only
(c) 3 only
(d) 1, 2 and 3

59. What will be the effect of 'operation twist' under Open Market Operation by the RBI?

(a) It brings down the short-term investment rates and increase long-term rates.
(b) It decreases long-term investment rates and increases short-term rates.
(c) It will make short-term loans less expensive without affecting long-term rates.
(d) It will have no impact on the savings rate of the economy.

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60. In the context of the Capitalist Class role in the freedom struggle, consider the following statements about the Bombay Plan of 1944-45 :

1. It advocated a mixed economic model.
2. It aimed to double the per capita income within a period of fifteen years.
3. It defined a reasonable living standard, cost of housing, clothing and food, etc to individuals.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

61. Which of the following institutions is/are mentioned in the Constitution as the Institution of National Importance?

1. Banaras Hindu University
2. Indian Institute of Science, Bangalore
3. Aligarh Muslim University
4. Delhi University

Select the correct answer using the code given below.

(a) 1, 3 and 4 only
(b) 2 only
(c) 1, 2 and 3 only
(d) None

62. Which of the following represents the demands made by Gandhiji to the Government before Civil Disobedience Movement?

1. Reduction in land revenue by 50 per cent.
2. Popular control over issue of firearm licenses.
3. Introduce protection of nascent steel industry.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

63. With reference to the works of Bhaskaracharya in the 12th century AD, consider the following statements:

1. He is famous for the work *Lilavati* which deals with the arithmetic domain of Mathematics.
2. The *chakrawat* method to solve algebraic equations was introduced by Bhaskaracharya.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

64. Consider the following passage :

He was a great builder of cave temples at places like Mandagapattu, etc. He authored the Sanskrit work Mattavilasa Prahasanam. For his talent in paintings, he is given the title Chitrakarapuli. He was also an expert in music.

Who among the following is being described in the above passage?

(a) Mahendravarman I
(b) Narasimhavarman I
(c) Rajasimha
(d) Pulakesin II

65. Consider the following statements with respect to Upper air circulation in the Indian subcontinent:

1. The westerly jet stream withdraws from the North Indian plains with the northward shift of the Inter-Tropical Convergence Zone.
2. The easterly jet stream blows over peninsular India during the Summer season.
3. The easterly jet streams steer tropical cyclones towards India.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

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66. Which of the following antiquities has been found in Mohenjodaro during excavation?

1. Bearded priest
2. Mother goddess
3. Fire Altars

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

67. These hereditary communities of Muslim musicians reside in Western Rajasthan's Barmer district and the adjoining areas across the Indo-Pak border. The folk art practiced by them has seen patronage of Bhatis and Sindhi Sipahis. The American Institute of Indian Studies has recently taken a research project to conserve their culture and tradition which was severely hit by the Covid pandemic.

Identify the community from the passage given above.

(a) Manganiyar
(b) Santani
(c) Damor
(d) Tadvi

68. Consider the following statements regarding the Nalanda University:

1. It was founded by Kumaragupta I.
2. Hiuen Tsang, the Chinese traveller visited this University and also gave lectures.
3. Teachings at the university were confined to Mahayana doctrine.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 only
(d) 1, 2 and 3

69. Consider the following statements with reference to the National Policy on Software Products, 2019:

1. An Indian Software product registry will be created through industry ownership.
2. It aims to generate direct and in-direct employment for 3.5 million people by 2025.
3. A Software Product Development Fund with a corpus of 500 crores will be created to provide capital for research and innovation.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

70. Consider the following pairs:

Exercise		***Countries***
1. Ekuverin	:	Maldives and India
2. Zapad 2021	:	Russia and India
3. Surya Kiran	:	Sri Lanka and India

Which of the pairs given above is/are correct?

(a) 1, 2 and 3
(b) 2 only
(c) 1 and 3 only
(d) 1 and 2 only

71. Estuaries are considered one of the most productive water bodies in the world. Which of the following reasons may account for the same?

1. Mixing of freshwater and saline water zone.
2. High exposure to wave action.
3. Presence of tidal bores.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

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72. With reference to the Agricultural Census 2015-16 in India, which one of the following states has the highest operated area in India?
(a) Rajasthan
(b) Uttar Pradesh
(c) Madhya Pradesh
(d) Karnataka

73. Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions report was recently released by:
(a) United Nations Framework Convention on Climate Change
(b) International Union of Air Pollution Prevention and Environmental Protection Associations
(c) United Nations Environment Programme
(d) World Economic Forum

74. Which of the following are a part of the Capital Receipts of the Government of India?
1. Post-Office Savings Accounts
2. Borrowing by the Government from the Reserve Bank of India
3. Dividends and profits on investments made by the Government

Select the correct answer using the code given below.
(a) 1 and 2 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

75. Which of the following statements is/are correct regarding ocean currents?
1. West coasts of the continents in the middle and higher latitudes are bordered by warm currents.
2. The complete reversal of the north Indian Ocean currents between summer and winter is due to Indian Ocean Dipole.
3. The mixing zones of cold and warm ocean currents are the most productive fishing grounds on earth.

Select the correct answer using the code given below.
(a) 1 and 3 only
(b) 2 only
(c) 1 and 2 only
(d) 1 only

76. Consider the following statements with reference to the differences between Seagrasses and Seaweeds:
1. While seagrasses are considered vascular plants which have roots, stems, and leaves, seaweeds have little or no vascular tissues.
2. In nature, there are more number of seagrass species than species of seaweeds.
3. While seagrasses reproduce through production of spores, seaweeds reproduce sexually through flowers.

Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 only
(d) 1, 2 and 3

77. Which of the following is/are correct regarding Fuel cell technology?
1. It uses a source of hydrogen as fuel.
2. The byproducts of a fuel cell include carbon dioxide and water.

Select the correct answer using the code given below.
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

78. Consider the following statements in the context of the Andaman and Nicobar Islands:
1. The islands are an elevated portion of the submarine mountains.
2. The Andaman and Nicobar islands receive convectional rainfall and have an equatorial type of climate.
3. Ten Degree Channel separates the Andaman Islands and the Nicobar Islands from each other.

Which of the statements given above is/are correct?
(a) 1 only
(b) 1 and 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

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79. With reference to the Contingency Fund of the Central bank, consider the following statements:

1. It is used to meet incidental expenses arising out of monetary and exchange rate policy operations.
2. Although maintained by the Reserve Bank of India, the fund is retained by the Central government.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

80. Recently, the government has banned Streptomycin and Tetracycline for use in agriculture as they are related to

(a) antimicrobial resistance TB
(b) spread of viral diseases
(c) pink ballworm attack
(d) persistent organic pollutants

81. Recently seen in the news SACRED Portal is related to:

(a) Indian Railways portal of special train packages to holy tourist places
(b) Portal for the re- employment of Senior citizens
(c) Collection of Bhakti and Sufi literature by Ministry of Culture
(d) Integration of good hygiene practices in all religions across India to fight against COVID

82. With reference to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, consider the following statements:

1. A social media intermediary having ten lakh registered users in India shall be considered as a Significant Social Media Intermediary (SSMI).
2. A Resident Grievance officer will be established by the SSMI for a robust grievance redressal mechanism.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

83. Consider the following statements with reference to the lower judiciary in India:

1. In Gram Nyayalayas, the Nyayadhikari (Presiding officer) shall be appointed by the State Government in consultation with the High Court.
2. The State Government may, with the concurrence of the High Court, appoint one or more persons to be the Judge or Judges of a Family Court.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

84. Consider the following pairs:

Declaration		***Related to***
1. Changwon Declaration	:	Wetlands and human well-being
2. Clydebank Declaration	:	Green shipping corridors./New York Declaration : Forests
3. Stockholm Declaration	:	Protection of the ozone Layer

Which of the pairs given above is/are correctly matched?

(a) 1, 2 and 3
(b) 1 and 2 only
(c) 1 only
(d) 2 and 3 only

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85. With reference to the Delhi Sultanate, Majlis-i-Khalwat is a term used for

(a) a religious intellectual group of Muslims.

(b) an officer specializing in news gathering and intelligence.

(c) a department looking after the establishment of horses and elephants.

(d) a council of Ministers to assist the Sultan.

86. With reference to Payment Banks, consider the following statements:

1. They are first proposed by the Nachiket Mor committee.
2. Payments Banks are not bound by the reserve requirement rules of RBI.
3. Payments banks are not permitted to handle cross border remittance transactions.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

87. Which of the following best describes 'Foundation Species' in an ecosystem?

(a) It is the primary species that is invariably chosen for ecosystem conservation.

(b) It is a species whose addition to or loss leads to major changes in abundance of at least one other species.

(c) It is a species whose presence indicates the presence of a set of other species.

(d) It is a dominant primary producer in an ecosystem.

88. Which of the following is/are the outcomes of the COP26 UNFCCC held in Glasgow?

1. A pledge to "phase out" coal was undertaken by India and China.
2. The Clydebank Declaration for coordination between International Solar Alliance and United Nations Environment Program.
3. Glasgow Financial Alliance for Net Zero was established.

Select the correct answer using the code given below.

(a) 1 only

(b) 1 and 3 only

(c) 3 only

(d) 1, 2 and 3

89. Consider the following statements:

1. Neuston are organisms that remain attached to stems and leaves of rooted plants.
2. Plankton are microscopic plants like algae and animals found in aquatic ecosystems.
3. Benthic organisms are those found living at the bottom of the water mass.
4. Periphyton are unattached organisms that live at the air-water interface.

Which of the statements given above are correct?

(a) 2 and 3 only

(b) 1, 3 and 4 only

(c) 2 and 4 only

(d) 1, 2, 3 and 4

90. Which of the following were the causes of the 1857 revolt?

1. The British policy of Pax-Britanncia
2. The Religious Disabilities Act, 1850
3. The Post office Act, 1854
4. The General Service Enlistment Act, 1856

Select the correct answer using the code given below.

(a) 2 and 4 only

(b) 1, 2 and 4 only

(c) 1 and 3 only

(d) 1, 2, 3 and 4

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91. With reference to recently seen in the news, Flex Fuel Engines, consider the following statements:

1. Flex Fuel Engines are capable of operating on 100% ethanol.
2. India is the first country to moot the idea of Flex fuel Engines for domestic vehicles at the UNFCC COP26, Glasgow.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

92. Which of the following statements is/are correct regarding the Metropolitan Planning Committees (MPCs)?

1. The Constitution mandates formation of Metropolitan Planning Committees in all metropolitan areas with a million-plus population.
2. It should have atleast two-thirds of the members elected by corporators of municipalities and chairpersons of panchayats in the metropolitan area.
3. It submits the development plan to the Ministry of Urban Development.

Select the correct answer using the code given below.

(a) 1, 2 and 3
(b) 1 and 2 only
(c) 3 only
(d) 2 and 3 only

93. With respect to the twelfth Five Year Plan (2012-17), consider the following statements:

1. It emphasized to bring the economy back to rapid growth while ensuring that the growth is both inclusive and sustainable.
2. This plan reduced the number of Centrally sponsored schemes in order to improve their implementation.

Which of the statements given above are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

94. Consider the following statements regarding 'dual system' of administration introduced by Robert Clive:

1. It was introduced as a solution of the political tangle in the Awadh state.
2. It granted diwani functions to the ruler and nizamat functions to the Company.
3. It was abolished by Warren Hastings.

Which of the statements given above is/are correct?

(a) 2 and 3 only
(b) 1 and 2 only
(c) 3 only
(d) 1, 2 and 3

95. "Quantum technology" has applications in which of the following?

1. Discovery of medicines for chronic diseases
2. Secure transmission of information
3. Early warning systems for earthquakes.

Select the correct answer using the code given below.

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2 and 3
(d) 1 and 3 only

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96. Consider the following statements regarding the Consultative Committees:

1. They are constituted by the Speaker of Lok Sabha.
2. A Minister can be appointed as its Chairman.
3. These committees are generally constituted for one year.

Which of the statements given above is/are correct?

(a) 1, 2 and 3
(b) 1 and 3 only
(c) 2 only
(d) 2 and 3 only

97. Consider the following statements regarding Dadabhai Naoroji:

1. He founded the East India Association in London with the aim of putting across the Indian point of view before the British public.
2. He was elected as the President of the Indian National Congress (INC) only once.
3. He started a newspaper called 'Voice of India'.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1 and 2 only
(c) 1 and 3 only
(d) 3 only

98. With reference to India's trade during 2015-2020, consider the following statements:

1. Merchandise exports declined, whereas imports increased steadily during this period.
2. India has a positive trade balance in services during the entire period.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

99. With reference to the river Yamuna, consider the following statements:

1. The catchment of the Yamuna river system is spread across six states.
2. Chambal, Sind, Betwa, and Ken are its left bank tributaries.
3. Son river is its major right-bank tributary.

Which of the statements given above is/are correct?

(a) 1 only
(b) 1, 2 and 3
(c) 3 only
(d) 2 only

100. With reference to the Indian Gold Coin, consider the following statements:

1. The Indian Gold Coin is the only BIS hallmarked Gold Coin in India.
2. The sale of Indian Gold Coin is through online e-commerce platform and offline multiple marketing channels.
3. The coins are minted by Security Printing and Minting Corporation of India.

Which of the statements given above is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 only
(d) 1, 2 and 3

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ANSWERS & EXPLANATIONS
GENERAL STUDIES (P) TEST – 3494 (2022)

Q 1.C

- **Under Article 28, no religious instruction shall be provided in any educational institution wholly maintained out of State funds. Hence option (a) is not correct.**
  - Article 28 distinguishes between four types of educational institutions:
    (a) Institutions wholly maintained by the State.
    (b) Institutions administered by the State but established under any endowment or trust.
    (c) Institutions recognised by the State.
    (d) Institutions receiving aid from the State.
  - **In (a) religious instruction is completely prohibited while in (b), religious instruction is permitted. In (c) and (d), religious instruction is permitted on a voluntary basis.**
- **Freedom of Movement under Article 19 entitles every citizen to move freely throughout the territory of the country.**
  - The freedom of movement has two dimensions, viz, internal (right to move inside the country) and external (right to move out of the country and right to come back to the country). Article 19 protects only the first dimension. **The second dimension i.e. external movement is dealt by Article 21 (right to life and personal liberty). Hence option (b) is not correct.**
- **Freedom of Speech and Expression,** under Article 19, implies that every citizen has the right to express his views, opinions, belief and convictions freely by word of mouth, writing, printing, picturing or in any other manner.
  - In Communist Party of India (M) v. Bharat Kumar case (1998), SC clarified that "Bands" do not fall within the fundamental right of speech. A Bandh is a warning to a citizen that if he goes for work or opens his shop he would be prevented. Even if legislature does not prohibit them courts should intervene to protect the right to work or right to study. **Hence option (c) is the correct answer.**
- **Article 18 abolishes titles and makes four provisions in that regard:**
  - It prohibits the state from conferring any title (except a military or academic distinction) on any body, whether a citizen or a foreigner.
  - It prohibits a citizen of India from accepting any title from any foreign state.
  - A foreigner holding any office of profit or trust under the state cannot accept any title from any foreign state without the consent of the president. (d) No citizen or foreigner holding any office of profit or trust under the State is to accept any present, emolument or office from or under any foreign State without the consent of the president.
  - In 1996, the Supreme Court upheld the constitutional validity of the National Awards—Bharat Ratna, Padma Vibhushan, Padma Bhushan and Padma Sri. It ruled that these awards do not amount to 'titles' within the meaning of Article 18 that prohibits only hereditary titles of nobility. Therefore, they are not violative of Article 18 as the theory of equality does not mandate that merit should not be recognised. **However, it also ruled that they should not be used as suffixes or prefixes to the names of awardees. Otherwise, they should forfeit the awards. Hence option (d) is not correct.**

Q 2.C

- **Quit India, 'Bharat Choro'.** This simple but powerful slogan launched the legendary struggle which also became famous by the name of the **August Revolution**. In this struggle, the common people of the country demonstrated unparalleled heroism and militancy.
- It initially started as an **urban revolt**, marked by strikes, boycott and picketing, **which were quickly suppressed**. In the middle of August, the focus shifted to the countryside, which witnessed a major peasant rebellion, marked by destruction of communication systems, such as railway tracks and stations,

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authority and finally, the formation of "national governments" in isolated pockets. **Hence option (c) is the correct answer.**

- According to official estimates, in the first week after the arrests of the leaders, 250 railway stations were damaged or destroyed, and over 500 post offices and 150 police stations were attacked. The movement of trains in Bihar and Eastern U.P., was disrupted for many weeks. By the end of 1942, over 60,000 persons had been arrested. Twenty-six thousand people were convicted and 18.000 detained under the Defence of India Rules. **Martial law had not been proclaimed**, but the army, though nominally working under the orders of the civilian authorities, often did what it wanted to without any reference to the direct officers. The repression was as severe as it could have been under martial law.
- **Gandhiji refused to condemn the violence** of the people because he saw it as a reaction to the much bigger violence of the state.

Q 3.A

- **Dieback:** It refers to the progressive death of twigs and branches which generally start at the tips. Dieback, a common symptom or name of the disease, especially of woody plants, is characterized by progressive death of twigs, branches, shoots, or roots, starting at the tips.
    - **Staghead is slow dieback of the upper branches of a tree; the dead, leafless limbs superficially resemble a stag's head. Dieback and staghead are caused by many fungi and a few bacteria that produce cankers, anthracnose, wilts, and stem or root rots. Hence option (a) is the correct answer.**
    - Nematodes, stem- or root-boring insects, mechanical damage, paving over roots, winter injury from cold or deicing salts, and a deficiency or excess of moisture or an essential element may cause dieback, directly or indirectly.
        - Corrective practices such as proper watering, fertilization, and pruning are not guaranteed solutions in all cases.
- **Symptoms**
    - Symptoms of decline and dieback are often subtle, slow in developing, and usually uniform throughout the crown. General symptoms of decline and dieback may include pale green or yellow leaves, delayed spring flush of growth, scorching of the leaf margins, small leaves, reduced twig, and stem growth, early leaf drop, premature fall coloration, and, as the disease complex worsens, thinning of foliage in the crown, dieback of twigs and branches, and production of suckers on the branches and trunk.
- **Rose Dieback (Rose Wilt, Stunt) Disease:**
    - Dieback, stunt, and wilt symptoms have been observed on many rose cultivars wherever roses are grown. They have been described as separate virosis by different researchers, but comparative studies have revealed that these were symptoms of one and possibly a complex of diseases and were named rose dieback or rose wilt.

Q 4.B

- Viral vector-based vaccines differ from most conventional vaccines in that they don't actually contain antigens, but rather use the body's own cells to produce them.
- **A viral vector vaccine uses a harmless version of a different virus, called a "vector,**" to deliver information to the body that helps it protect you. For coronavirus, adenoviruses, a type of common cold virus, that attaches itself to cells and inject DNA that tells the cells to make coronavirus spike protein. **Hence, statement 1 is not correct.**
- By infecting cells and instructing them to make large amounts of antigen, which then trigger an immune response, the vaccine mimics what happens during natural infection with certain pathogens - especially viruses. **This has the advantage of triggering a strong cellular immune response by T cells as well the production of antibodies by B cells.**
- ADVANTAGES OF VIRAL VECTOR-BASED VACCINES
    - Well-established technology
    - Strong immune response
    - **Immune response involves B cells and T cells; Hence, statement 2 is correct.**
- But Viral vector vaccines are relatively complex to manufacture and previous exposure to the vector could reduce the effectiveness of the vaccine. **Hence, statement 3 is correct.**

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- The Amravati School of Art flourished in the region of Andhra Pradesh between the lower valleys of rivers Krishna and Godavari.
- The **main patrons of this art form were the Satavahanas** but it carried on even later, patronized by their successor Ikshavaku rulers. This art is said to have flourished between 150 BC and 350 AD. **Hence, statement 1 is correct.**
- **An important characteristic of the Amravati school is the 'narrative art'.** The medallions were carved in such a manner that they depict an incident in a natural way. For example one medallion depicts a whole story of 'taming of an elephant by the Buddha'. **There is prominence of human figures rather than to figures drawn from nature. Hence, statement 2 is correct.**
- The **great stupa of Amaravati was adorned with white marble (spotted red sandstone was used by Mathura school of architecture,** reliefs depicting scenes of the Buddha's life and surrounded with free-standing Buddha figures. **Hence, statement 3 is not correct.**

Q 6.C

- **Inflationary spiral- An Inflationary situation in an economy results out of a process of wage and price interaction as when wages press prices up and prices pull wages up. It is known as an inflationary spiral. The wage-price interaction was seen as a plausible cause of inflation in the year 1935. Hence option (c) is the correct answer.**
- **Inflation Accounting**It is a popular term in the area of corporate profit accounting. Due to inflation, the profits of the firms got overstated. -It is the process of calculating the profits of the firm by adjusting the inflation. These are the real profits of the firm.
- **Inflation premium**The bonus brought by the inflation to the borrowers is known as the inflation premium. The interest bank charge on lending is known as the nominal interest rate, which might not be the real cost of borrowing paid by the borrower to the banks. -To calculate the real cost a borrower is paying on its loan, the nominal rate of interest is adjusted with the effect of inflation and thus the interest we get is known as the real interest rate. -The real interest rate always lowers the nominal interest rate if the inflation is taking place- the difference is the inflation premium.
- **Inflation Tax**-Inflation erodes the value of money and people who hold currency suffer in this process. As the government has the authority to print currency and bring it into the market, this functions as an income to the government. -This is the situation of sustaining government expenditure at the cost of people's income. This looks as if inflation is working as a tax. This is how the term inflation tax is also known as seigniorage.

Q 7.C

- NASA's Lucy mission is the **first spacecraft launched to explore the Trojan asteroids, a population of primitive asteroids orbiting in tandem with Jupiter.**
- **Trojans are small bodies that are remnants of our early solar system. They orbit the Sun in two loose groups: one group leading ahead of Jupiter in its orbit, the other trailing behind. Hence both statements 1 and 2 are correct**
- During its 12-year primary mission, **Lucy will explore a record-breaking number of asteroids, flying by one main belt asteroid, and seven Trojans.**
- Therefore, the mission is designed to understand the composition of the diverse asteroids that are a part of the Trojan asteroid swarms, to determine the mass and densities of the materials and to look for and study the satellites and rings that may orbit the Trojan asteroids.
- The Lucy mission is named after the fossilized skeleton of an early hominin (pre-human ancestor) discovered in Ethiopia in 1974 and named "Lucy" by the team of paleoanthropologists who discovered it. Just as the Lucy fossil provided unique insights into humanity's evolution, the Lucy mission promises to revolutionize our knowledge of planetary origins and the formation of the solar system, including Earth.

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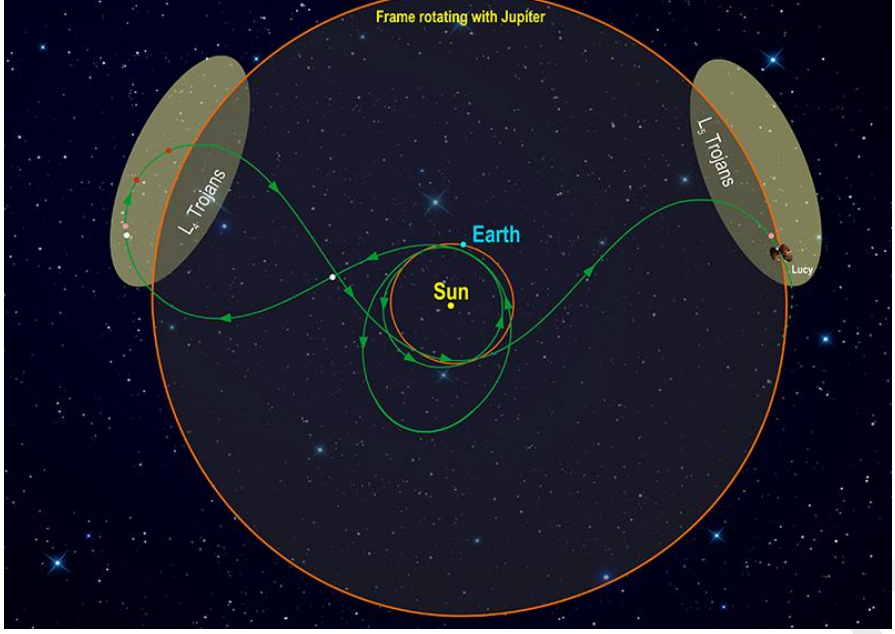

Q 8.B

- For the decision of election disputes, the Constitution provides **[Art.329] that the ordinary courts of the land will have no jurisdiction** and that any question relating to an election can be agitated only by an election petition, as provided for by law.
- Under the Representation of the People Act, the power to decide an election petition is vested in the High Court, with appeal to the Supreme Court.
- **By Art. 323B of the Constitution, as inserted by the Constitution (42nd Amendment) Act, 1976, power has been conferred on the appropriate Legislature to set up a Tribunal for the adjudication of disputes relating to elections of the Legislature concerned, by making law**, and to provide in such law for the exclusion of all Courts (save that of the Supreme Court under Art. 136), to entertain any such matter. In short, when any such law is made in exercise of this power, the High Court will cease to have any jurisdiction over election disputes; they will be determined only by the Administrative Tribunal set up by law, with appeal from the decision of such Tribunal to the Supreme Court by special leave under Art. 136. **Hence statement 2 is correct.**
- In Art. 71 of the Constitution, the exclusive forum for adjudicating disputes relating to the election of the President and Vice-President is the Supreme Court. There is no special provision for the Prime Minister or the Speaker of the House of the People, so that any dispute relating to election to these offices is to be determined only by an election petition **before the High Court, according to Art. 329(b). Hence statement 1II is correct.**
- The election disputes related to Panchayats:
  - In the case of a village panchayat, the Munsiff's Court having jurisdiction over the place in which the headquarters of the panchayat is located; and
  - In the case of block panchayat or district panchayat the district court having jurisdiction over the place in which the headquarters of the panchayat concerned is located.
  - The Government shall, in consultation with the High Court notify the appropriate courts in the Gazette.
  - **Hence statement 1 is not correct.**

Q 9.C

- **Fiscal slippage** in simple terms is any deviation in expenditure from the expected or also one can say **postponing the fiscal deficit targets.** When the government's expenditure surpasses the expected or estimated levels it is the fiscal slippage threat that the country then reels in. India's fiscal deficit is one of the highest in the world. **For the rise in physical deficit will means negative savings for the government. This increases government borrowing, which in turn keeps interest rate highs, crowds out private sector credit, adds to already high government debt and become a key source of macroeconomic vulnerability.**

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- The National Savings Certificate (NSC) is a small savings scheme backed by the government **which can be purchased from any general post office in India. Hence statement 1 is correct**
- NSC provides **guaranteed returns, tax rebates as per section 80C of the IT Act, 1961** and NSC interest rates of 8.5% and 8.8% for **NSC VIII (five years) and NSC IX (10 years) respectively**. The interest, under this scheme, is compounded on a half-yearly basis. **Hence statement 2 is correct.**
- The deposits can be opened with a **Minimum of Rs.1000 and in multiple of Rs.100, no maximum limit and any number of accounts can be opened** under the scheme. The deposit shall mature on the completion of **five years from the date of the deposit (NSC VIII issue).**
- NSC may be pledged or transferred as security, by submitting the prescribed application form at the concerned Post Office supported with an acceptance letter from the pledgee.
- Transfer/pledging can be made to the following authorities.**-The President of India/Governor of the State**, **RBI/Scheduled Bank/Co-operative Society/Co-operative Bank.-Corporation (public/private)/Govt. Company/Local Authority.-Housing finance company. Hence statement 3 is correct.**
- **A pledged asset** is a valuable possession that is transferred to a lender to secure a debt or loan. Hence pledging means the transfer of an asset from a **debtor (the pledgor)** to a creditor **(the pledgee)** to secure repayment for some debt or obligation and to the mutual benefit of both parties.

Q 11.D

- The Terai Arc Landscape (TAL) is an 810km stretch spread across the Indian states of Uttarakhand, Uttar Pradesh and Bihar, and the low lying hills of Nepal. It comprises the Shivalik hills, the adjoining bhabhar areas and the Terai flood plains. The Protected Areas in this landscape are connected with one another through wildlife corridors, which are mostly part of the interconnected Reserve Forests. These corridors are used by wildlife, especially large mammals, to move from one forest to another, in an attempt to find new territory, mate and prey.
- **Statement 1 is correct:** TAL comprises an area that stretches between the river Yamuna in the west and the river Bhagmati in the east, comprising the Shivalik hills, the adjoining bhabhar areas and the Terai flood plains.
- **Statement 2 is correct:** These forests are home to three flagship species, the Bengal tiger (Panthera tigris), the greater one-horned rhino (Rhinoceros unicornis) and the Asian elephant (Elephas maximus). Apart from these, there are several other species of cats such as the rusty-spotted cat, fishing cat, jungle cat, leopard and leopard cat, as well as antelopes and deer such as the four-horned antelope, sambar, chital, hog deer and barking deer. Other wildlife includes the sloth and Himalayan black bear, yellow-throated marten, Indian pangolin, Himalayan goral, Gangetic dolphin, gharial and crocodile.
- **Statement 3 is correct:** The landscape has 13 Protected Areas, nine in India and four in Nepal, covering a total area of 49,500 km2, of which 30,000km2 lies in India that includes India's most well-known Tiger Reserves and Protected Areas such as Corbett Tiger Reserve, Rajaji National Park, Dudhwa Tiger Reserve, Valmiki Tiger Reserve and Nepal's Bardia Wildlife Sanctuary, Chitwan National Park, and Sukhla Phanta Wildlife Sanctuary.

Q 12.B

- The Inter-State River Water Disputes are one of the most contentious issues in the Indian federalism today.
- **Constitutional Provisions:**
  - Entry 17 of State List deals with water i.e. water supply, irrigation, canal, drainage, embankments, water storage and water power.
  - Entry 56 of Union List empowers the Union Government for the regulation and development of inter-state rivers and river valleys to the extent declared by Parliament to be expedient in the public interest.
  - According to Article 262, in case of disputes relating to waters:
    - Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley.
    - Parliament may, by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as mentioned above.
    - **River Board Act, 1956:** This empowered the GOI to establish Boards for Interstate Rivers and river valleys in consultation with State Governments. Till date, no river board has been created. **Hence statement 1 is not correct.**
- The resolution of water dispute is governed by the Inter-State River Water Disputes Act, 1956.

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the Central Government is of opinion that the water dispute cannot be settled by negotiations, then a Water Disputes Tribunal is constituted for the adjudication of the water dispute. States can not directly approach the Tribunal in any case**. Hence statement 3 is not correct.**

- **The Chairman and members of the Water Dispute Tribunals are nominated by Chief Justice of India. Hence statement 2 is correct.**
- The tribunal has to be constituted within one year of the request.
- The tribunal should give the award within 3 years and in some exceptional cases, within 5 years.
- If the award is not immediately implemented, the concerned parties can seek clarification within three months.
- The tribunal award will have the same force as an order or decree of the Supreme Court. The award is final and above the SC's jurisdiction.
  - However, the states could still approach SC through Article 136 (Special Leave Petition).
  - Private persons could approach the SC under violation of Article 21 (Right to Life).

Q 13.B

- **The Turtle Survival Alliance (TSA)** was formed in 2001 as an **International Union for Conservation of Nature (IUCN) partnership** for sustainable captive management of **freshwater turtles and tortoises,** and initially designated a Task Force of the IUCN Tortoise and Freshwater Turtle Specialist Group. **Hence statement 1 is not correct.**
- The TSA arose in response to the rampant and unsustainable harvest of Asian turtle populations to supply Chinese markets, a situation known as the **Asian Turtle Crisis.**
- The TSA is a recognized force for turtle conservation globally.
- TSA's conservation actions utilize a three-pronged approach:
  - **Restoring populations in the wild where possible.**
  - **Securing species in captivity through assurance colonies. Hence statement 2 is correct.**
  - Building the capacity to restore, secure and conserve species within their range country.

Q 14.B

- Kabir was a 15th-century Indian mystic poet, Sufi and saint born in Varanasi. There is a controversy regarding the birth year of the saint. Some people hold that it is 1398 when other says that it is 1440.
  - Kabir is also a proponent of **Nirguna, the Supreme Being without form and properties. Hence statement 1 is correct.**
  - Kabir's strong **opposition to idolatry stems from this philosophy.** He says, "If worshipping a stone idol gets Hari then I will worship a mountain. Better is the grinding stone, which grinds and feeds the world."
- **Kabir was Influenced and initiated to bhakti by Ramananda, saint of Vaishnava bhakti tradition.**
- Kabir's spiritual teaching verses can be classified into three categories:
  - **Ramaini:** In the Ramaini, Kabir described the creation of the world and the wandering of the soul in it, he used doha and pada verses to express these.
  - **Sakhi:** In Sakhi (witness of truth), he analyzed events perceived through senses but grasped through the intellect;
  - **Sabad:** the Sabad collets the word of the Master.
- The **greatest work of Kabir is known as Bijak, seeds of his teaching. In this collection of poems Kabir showed a new universal spiritual path, focused on the oneness of God without distinctions. Hence statement 2 is correct.**
- He **considered neither asceticism nor book knowledge important for the true knowledge of God.** The mission of Kabir was to preach a religion of love which would unite all caste and creeds. He rejected those features of Hinduism and Islam which were against this spirit and which were of no importance for the real spiritual welfare of the individual. **Hence statement 3 is not correct.**
- Kabir strongly denounced the caste system, especially the practice of untouchability and emphasised the fundamental unity of man. He was opposed to all kinds of discrimination between human beings, whether on the basis of castes, or religion, race, family or wealth.
- **He breathed his last at Maghar located in Purvanchal (Near Gorakhpur).** It has a distinction of having both, a mausoleum and a temple dedicated to Sant Kabir.

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- The **Rowlatt Act (Black Act)** was passed on **March 10, 1919**, authorizing the government to imprison or confine, without a trial, any person associated with seditious activities. This led to nationwide unrest. Gandhi initiated Satyagraha to protest against the Rowlatt Act.
- **Dr Saifuddin Kitchlew and Dr Satyapal**, the two prominent leaders who were a symbol of Hindu-Muslim unity, organised a peaceful protest against the Rowlatt Act in Amritsar. **On April 9, 1919, Ram Naumi was being celebrated when O' Dwyer issued orders to the Deputy Commissioner, Mr Irving to arrest Dr Satyapal and Dr Kitchlew.**
- **Two days after the massacre (i.e.15th April),** Martial Law was clamped down on five districts - Lahore, Amritsar, Gujranwala, Gujarat and Lyallpore. The declaration of Martial Law was to empower the Viceroy to direct immediate trial by court-martial of any person involved in the revolutionary activities**. As the news of the massacre spread across the nation, Tagore renounced his Knighthood.**
- On **October 14, 1919, the Disorders Inquiry Committee was formed to inquire about the massacre**. It later came to be known as the Hunter Commission. The Hunter Commission was directed to announce their verdict on the justifiability, or otherwise, of the steps taken by the government.
- **Hence the correct sequence of events is 1-2-4-3.**

Q 16.C

- Recently, Scientists have found the first clues to understand violent short duration flares from a compact star of rare category called magnetar located thirteen million light years away.
- **A magnetar is an exotic type of neutron star,** its defining feature that it has an ultra-powerful magnetic field. The f**ield is about 1,000 times stronger than a normal neutron star and about a trillion times stronger than the Earth's. Hence statement 1 is correct**
- These compact stars with the most intense magnetic field known, of which only thirty have been spotted so far in our galaxy, suffer violent eruptions that are still little known due to their unexpected nature and their short duration.
- It is believed that **eruptions in magnetars may be due to instabilities in their magnetosphere or to a kind of "earthquakes"** ("starquakes") produced in their crust, a rigid and elastic layer about a kilometer thick. **"Regardless of the trigger, in the magnetosphere of the star a type of waves will be created. These waves which are well known in the Sun, are called Alfvén waves** and while bouncing back and forth between the points at the base of its lines of magnetic field, they interact with each other dissipating energy. **Hence statement 2 is correct**

Q 17.C

- Recently, the Indian Rupee hit a low of 75.4 against the US Dollar and is one of the biggest losers among the emerging market currencies. The major reasons that could lead to a depreciating move in Rupee are
  - A hike in interest rates in the US has a bearing on the debt and equity markets, not just in the US but also in emerging economies such as India that have witnessed record foreign portfolio investments (FPI). If the money supply is tightened in the US (increase in interest rates), capital that would otherwise be destined for India, would get routed to the US. There will be increased demand for the US dollar and the rupee, like other currencies, will depreciate. **Hence, statement 1 is correct.**
  - The dwindling support of the foreign portfolio investors, who pumped huge inflows into Indian equity markets is also one of the reason for the depreciation of the rupee. **Hence, statement 2 is not correct.**
  - The Rupee came under severe pressure with RBI's announcement, to maintain fairly accommodative monetary policy and that it will inject liquidity through the Government Securities Acquisition Programme (G-SAP) programme — starting with Rs 1 lakh crore in the current quarter. An increase in the money supply weakens the currecny. **Hence, statement 3 is correct.**

Q 18.D

- Though the planned economic development in India began in 1951 with the inception of the First Five Year Plan, theoretical efforts had begun much earlier, even prior to the independence. **Setting up of National Planning Committee by Indian National Congress in 1938, The Bombay Plan & Gandhian Plan in 1944, Peoples Plan in 1945 (by post-war reconstruction Committee of Indian Trade Union), Sarvodaya Plan in 1950 by Jaiprakash Narayan stepped in this direction. Hence option (d) is the correct answer.**
- In layman's terms, Sarvodaya means '**welfare for all.**
- **Mahatma Gandhi coined the term 'Sarvodaya' from John Ruskin's book 'Unto the Last'.**

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principle and the Bhoodan Yajna Movement, founded by Vinoba Bhave, which demanded that land be distributed among the landless.

- **The plan emphasised small and cotton industries alongside agriculture and suggested freedom from foreign technology. It also stressed land reforms.**
- Based on Gandhian techniques of constructive work by the community and trusteeship as well as the Sarvodaya concept of Acharya Vinoba Bhave, the plan also included foresight on self-dependent villages and decentralised participatory form of planning and economic progress.
- Some of the accepted ideas of the plan got their due importance when the Government of India, helmed by Jawaharlal Nehru, promoted the five-year plans.

Q 19.B

- **Diffraction is the slight bending of light as it passes around the edge of an object. If an opaque object on the path of light becomes very small, light has a tendency to bend around it and not walk in a straight line.** Then the straight-line treatment of optics using rays fails.
- In the atmosphere, diffracted light is actually bent around atmospheric particles -- most commonly, the atmospheric particles are tiny water droplets found in clouds. Diffracted light can produce fringes of light, dark or coloured bands. An optical effect that results from the diffraction of light is the silver lining sometimes found around the edges of clouds or coronas surrounding the sun or moon. The illustration above shows how light (from either the sun or the moon) is bent around small droplets in the cloud.
- **Hence, option (b) is correct.**

Q 20.D

- Western Ghats are locally known by different names such as **Sahyadri in Maharashtra, Nilgiri hills in Karnataka and Tamil Nadu and Anaimalai hills and Cardamom hills in Kerala.**
- **'Anaimudi' (2,695 m), the highest peak of Peninsular plateau is located on the Anaimalai hills of the Western Ghats in the state of Kerala. Hence pair 1 is correctly matched**
- **Dodabetta (2,637 m) on the Nilgiri hills is the second highest peak of the Peninsular Plateau located in the state of Tamil Nadu Hence pair 3 is correctly matched**
- **At Nilgiri Hills, Western Ghats and Eastern ghats meet each other.**
- **Nanda Devi is the second highest peak in India** with an elevation of **7,816m**. **It is located in the state of Uttarakhand. Hence pair 2 is correctly matched.**
- Nanda Devi National Park, which is situated around the peak of Nanda Devi, is the **UNESCO World Heritage site.**
- In 2021, A portion of the Nanda Devi glacier broke off in Uttarakhand's Chamoli district, triggering an avalanche and a deluge in the Alaknanda river system which caused heavy flooding and destruction in the state of Uttarakhand.

Q 21.C

- Recently, **India has climbed two spots and has been ranked 46th in the Global Innovation Index (GII) 2021 rankings. : The GII is launched by the World Intellectual Property Organization (WIPO),** a specialized agency of the United Nations. The GII aims to capture the multi-dimensional facets of innovation ranking and rich analysis referencing around 132 economies. India ranks 1st among the 10 economies in Central and Southern Asia. **Hence pair 1 is correctly matched**
- Recently, **United Nations Educational, Scientific and Cultural Organization (UNESCO) launched its 2021 State of the Education Report (SOER) for India: "No Teacher, No Class".** It aims to serve as a reference for enhancing the implementation of the National Education Policy (NEP) and towards the realization of the Sustainable Development Goal (SDG) 4 (target 4c on teachers). The report projects that India needs 11.16 lakh additional teachers to meet the current shortfall. **Hence pair 3 is matched correctly**
- On the occasion of the Good Governance Day (25th December)**, the government released the Good Governance Index 2021. The index was prepared by the Department of Administrative Reforms and Public Grievances (DARPG), Ministry of Personnel, Public Grievances and Pensions.** The objective of GGI is to create a tool that can be used uniformly across the States to assess the impact of various interventions taken up by the Central and State Governments including UTs.
- Recently, an Non-Governmental Organization (NGO), **Save the Children released the Global Girlhood Report 2021: Girls Right in Crisis.** The report highlights that West and Central Africa has the highest rate of child marriage in the world. Child marriage kills more than 60 girls a day globally, 26 girls a day in West and Central Africa and six girls a day in South Asia. **Hence pair 2 is not matched correctly**

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- **According to Section 20 of the Representation of People Act, 1950:**
  - A person **shall not be** deemed to be ordinarily resident in a constituency on the ground only that he owns, or is in possession of, a dwelling house therein.
    - Mere ownership or possession of a building or other immovable property will not bestow upon the owner, the residential qualification. On the other hand, even persons living in sheds and persons living on pavements without any roof are eligible for enrolment provided they are ordinarily resident in the sheds or on pavements in a particular area, do not change the place of residence, and are otherwise identifiable.
  - Temporary periods of absence from this ordinary place of stay can be ignored. It is not necessary that the period of stay should be continuous for any particular length of time and should be without any break. Temporary absence on account of duty or employment or even for pleasure should not be considered to interrupt the concept of ordinary residence.
  - A member of Parliament or of the Legislature of a State shall not during the term of his office cease to be **ordinarily resident in the constituency in the electoral roll of which he is registered as an elector at the time of his election** as such member, by reason of his absence from that constituency in connection with his duties as such member. **Hence statement 1 is not correct.**
  - Inmates of jails, other legal custody, hospitals, beggar homes, asylums, etc. should not be included in the electoral rolls of the constituency in which such institutions are located.
  - **Service Voters:** Normally, the serving members of the armed forces of the Union or the central para-military forces, State Armed Police personnel posted outside the state, and the government servants posted outside India in Indian Missions/High Commissions are enrolled in their native places and not at their places of postings. They are called 'Service Voters'. **Thus electors having a service qualification are entitled to get registered at their native places which maybe different from their ordinary residence. Hence statement 2 is not correct.**
    - Any person having a service qualification shall be deemed to be ordinarily resident on any date in the constituency in which, but for his having such service qualification, he would have been ordinarily resident on that date.

Q 23.C

- MPs and MLAs, as members of the legislature, hold the government accountable for its work. The essence of disqualification under the office of profit law is if legislators hold an 'office of profit' under the government, they might be susceptible to government influence, and may not discharge their constitutional mandate fairly. **The intent is that there should be no conflict between the duties and interests of an elected member.**
  - Hence, the office of profit law simply seeks to enforce a basic feature of the Constitution- **the principle of separation of power between the legislature and the executive. Hence statement 3 is correct.**
- Under the provisions of **Article 102 (1) and Article 191 (1) of the Constitution**, an MP or an MLA (or an MLC) is barred from holding any office of profit under the central or state government. **However, neither the Constitution nor any other law clearly defines what constitutes an office of profit** but the definition has evolved over the years with interpretations made in various court judgments. **Hence statement 2 is not correct.**
  - An office of profit has been interpreted to be a position that brings to the office-holder some financial gain, or advantage, or benefit. The amount of such profit is immaterial.
- The Parliament enacted the Parliament (Prevention of Disqualification) Act, 1959 to declare that certain offices of profit under the Government shall not disqualify the holders for **being chosen as, or for being, members of Parliament.**
  - **The power to disqualify an MLA or MP based on the office of profit lies with the President of India on the recommendations of the Election Commission of India. However, a person disqualified under the above law can appeal to the High Court. Hence statement 1 is not correct.**
  - The above law contains certain offices which can not be treated as 'Office of Profit' to disqualify a Member of Parliament, such as the office of **Chief Whip, Deputy Chief Whip or Whip in Parliament or of a Parliamentary Secretary, the office of the chairperson of**- the National Commission for Minorities, the National Commission for the Scheduled Castes, the National Commission for the Scheduled Tribes, the National Commission for women, etc.

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- Recently, ASSOCHAM suggested adoption of 'trench farming' to grow herbs, vegetables in Ladakh. Since farming season is very small in Ladakh, the farmers should be informed about alternatives to greenhouses, such as low tunnel technology or trench farming, to help them cultivate herbs and vegetables.
- **Statement 1 is correct:** Trench is a simple structure for growing vegetables during extreme winters.
- **Statement 2 is correct:** Trench cultivation harnesses soil and solar heat to create suitable climatic conditions for growth of leafy vegetables like spinach, fenugreek, coriander, lai etc.
- A suitable size of 30' x 10' x 3' with transparent UV stabilized 200 micron polythene sheets are used as the technology is low-cost and portable.
- The farmers can relocate the trench tunnel to whatever location they want.
- **Significance**
- The commercial cultivation of Indian and exotic vegetables and flowers can be taken up in large greenhouses to meet local demand in such hostile areas.
- The produce could be supplied to the rest of the country at a premium since India imports some of these vegetables from other countries.

Q 25.D

- **Rhacophorus pseudomalabaricus, also known as Anaimalai flying frog or False Malabar Gliding Frog** is usually larger than bush frogs. The female can grow up to three inches. It is endemic to the southern part of the Western Ghats. **Hence statement 1 is correct.**
- The number of these frogs have declined rapidly due to the loss of habitat. It is listed as **Critically Endangered on the IUCN Red List. Hence statement 2 is correct.**
- Mating takes place usually between June and October, during the rainy season. **The female creates foam nests on leaves, into which the eggs are laid and the male fertilises them. Hence statement 3 is correct.**
- The outer layer of foam protects the eggs from bacteria, predators and weather changes.
- When the eggs hatch, the nest disintegrates and tadpoles drop into the water body below.

Q 26.B

- The current operational criteria used by IMD for declaring the withdrawal from extreme north-western parts of the country was adopted in 2006 and consist of the following major synoptic features which will be considered only after 1st September.
  i) Cessation of rainfall activity over the area for **continuous 5 days.**
  ii) Establishment of **anticyclone in the lower troposphere** (850 hPa and below).
  iii) **Considerable reduction in moisture content** as inferred from satellite water vapour imageries and tephigrams.
- **Hence option (b) is correct answer.**

Q 27.A

- The Foreign Contribution (Regulation) Act, 2010 bars certain persons to accept any foreign contribution. These include: public servants, election candidates, editor or publisher of a newspaper, judges, government servants, members of any legislature, and **political parties**, among others. **Hence statement 1 is correct.**
- It makes Aadhaar number mandatory for all office bearers, directors or key functionaries of a person receiving foreign contribution, as an identification document.
  - In case of a foreigner, a copy of the passport or the Overseas Citizen of India card for identification is required.
- **It prohibits the transfer of foreign contribution to any other person. Hence statement 2 is correct.**
  - The term 'person' under the Act includes an individual, an association, or a registered company.
  - The FCRA 2010 allows transfer of foreign contributions to persons registered to accept foreign contributions.
- **Foreign contribution through scheduled bank-**
  - Every person who has been granted certificate or prior permission shall receive foreign contribution only in an account designated as **"FCRA Account" by the bank,** which shall be opened by him for the purpose of remittances of foreign contribution in such branch of the State Bank of India at New

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correct.
    - Provided that such person may also open another "FCRA Account" in any of the scheduled bank of his choice for the purpose of keeping or utilising the foreign contribution which has been received from his **"FCRA Account" in the specified branch of State Bank of India at New Delhi:**
- Every person, who is registered and granted a certificate or given prior permission under this Act and receives any foreign contribution,—
    - shall utilise such contribution for the purposes for which the contribution has been received: Provided that any foreign contribution or any income arising out of it shall not be used for speculative business:
    - shall not defray as far as possible such sum, not exceeding 20% of such contribution, received in a financial year, to meet administrative expenses: Provided that administrative expenses exceeding 20% of such contribution may be defrayed with prior approval of the Central Government.

Q 28.D

- The froth is a sign of a polluted river.
- The release of untreated or poorly treated effluents, including sewage from those parts of the city that are not connected to the sewerage network and industrial waste, could lead to frothing.
    - **Phosphates and surfactants in untreated sewages from Delhi, Haryana and UP is another reason behind frothing in the river.**
    - Phosphates are an ingredient used in many detergents. These compounds make cleaning a lot easier. **Hence statement 1 is correct.**
    - While phosphates and surfactants in the Yamuna river comprise 1%, the remaining 99% is air and water.
- When the water gets disturbed by waves, **natural waterfalls or artificial falls from river barrages**, the fatty layer gets beaten into a froth. **Hence statement 3 is correct.**
- During the winter season when the **river is in a lean phase** and the water flow is less frothing may occur as the Pollutants are not diluted. **Hence statement 2 is correct.**
- Industrial effluents, organic matter from **decomposing vegetation and the presence of filamentous bacteria can also cause foam. Hence statement 4 is correct.**

Q 29.B

- **Convention on Biological Diversity**
    - Convention on Biological Diversity (CBD) is a step towards conserving biological diversity or biodiversity with the involvement of the entire world.
    - The Convention on Biological Diversity (a multilateral treaty) was opened for signature at the Earth Summit in Rio de Janeiro in 1992 and entered into effect in 1993. It has two supplementary agreements, the Cartagena Protocol and Nagoya Protocol.
- **Aichi Targets for biodiversity:**
    - Along with Nagoya Protocol on Genetic Resources, the COP-10 also adopted a ten-year framework for action by all countries to save biodiversity.
    - Officially known as "**Strategic Plan for Biodiversity 2011-2020**", provide a set of 20 ambitious yet achievable targets (divided into 5 sections: A to E), collectively known as the **Aichi Targets for biodiversity. Hence statement 1 is correct.**
- **The Aichi Biodiversity Targets are:**
    - Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
    - Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use.
    - Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species, and genetic diversity
    - Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services.
    - Strategic Goal E: Enhance implementation through participatory planning, knowledge management, and capacity building.
    - According to the Sixth national report (NR6), 2018, India developed 12 National Biodiversity Targets in line with 20 global Aichi biodiversity targets.
- **Statement 3 is not correct: None of the 20 'Aichi Biodiversity Targets' agreed on by national governments through the United Nations Convention on Biological Diversity (CBD) have been met, according to CBD's Global Biodiversity Outlook 5 report.** The world was supposed to meet these

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have been partially achieved.

- On average, countries reported that more than a third of all national targets were on track to be met (34 per cent) or exceeded (3 per cent), the CBD report said. For another half of the national targets (51 per cent), progress was being made but not at a rate that would allow targets to be met. Only 11 per cent of national targets show no significant progress and one per cent are moving in the wrong direction.
- Whatever little progress has been made, has to do with the following:
  - Aichi Biodiversity Target 1 (Creating awareness about the value of biodiversity)
  - Aichi Biodiversity Target 11 (17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, to be effectively and equitably managed)
  - Aichi Biodiversity Target 16 (Access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation)
  - Aichi Biodiversity Target 17 (Creation, adoption and implementation of an effective, participatory and updated national biodiversity strategy and action plan)
  - Aichi Biodiversity Target 19 (Improvement and dissemination of knowledge, the science base and technologies relating to biodiversity).
- **Statement 2 is not correct:** The Aichi Biodiversity targets were included in the Strategic Plan for Biodiversity for the 2011-2020 period **adopted by the 10th meeting of the Conference of the Parties of the Convention on Biological Diversity.**

Q 30.C

- From 1905 onwards the Government of India followed a policy of cordial co-operation towards the Indian states. The growth of political unrest in British India put the Government of India on the defensive and the Government thought it expedient and prudent to utilise the support of Indian princes to counter progressive and revolutionary developments.
- The authors of **Montague-Chelmsford** Reforms favoured the **formation of a Council of Princes and made definite suggestions in the matter.** These recommendations formed the nucleus for the formation of the Chamber of Princes, formally inaugurated in February 1921.
- **It was by a royal proclamation that the Chamber of Princes was instituted on 8 February 1921**. The **inauguration ceremony was performed by His Royal Highness the Duke of Connaught in the Diwan-i-am of Red Fort on behalf of His Majesty the King Emperor. Hence statement 1 is correct.**
- For purposes of representation in the Chamber of Princes, the Indian states were divided into three categories :
  - 109 states which enjoyed full legislative and jurisdictional powers were represented directly. **Hence statement 2 is not correct.**
  - 127 states which enjoyed limited legislative and jurisdictional powers were represented by 12 members chosen from among themselves.
  - Remaining 326 states which could better be classed as jagirs or estates or feudal holdings.
  - The chamber of Princes was merely an advisory and consultative body. It had no concern with the internal affairs of individual states nor could it discuss matters concerning the existing rights of states or their freedom of action. **Hence statement 3 is correct.**

Q 31.A

- **Ramsar convention:**
  - It is an international treaty for the conservation and wise use of wetlands. It is named after the Iranian city of Ramsar, on the Caspian Sea, where the treaty was signed on 2 February 1971. Known officially as 'the Convention on Wetlands of International Importance especially as Waterfowl Habitat' (or, more recently, just 'the Convention on Wetlands'), it came into force in 1975.
  - India is a party to the Ramsar Convention. India signed under it on 1st February 1982 and Sundarbans is the largest Ramsar Site of India.
  - Chilika Lake (Orissa) and Keoladeo National Park (Rajasthan) were recognized as the first Ramsar Sites of India.
- **Ramsar Sites in India**
  - The Ramsar convention entered into force in India **on 1 February 1982.**
  - All wetlands, irrespective of their location, size, ownership, biodiversity, or ecosystem services values, can be notified under the Wetlands Rules 2017, except river channels, paddy fields, human-made waterbodies specifically constructed for drinking water, aquaculture, salt production, recreation, irrigation purposes, wetlands falling within areas covered under the Indian Forest Act, 1927, Forest

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Notification, 2011.
    - India has over 7 lakh wetlands, covering 4.5% of the country's area, yet none of the wetlands has been notified under domestic laws.
    - Wetlands are regulated under the Wetlands (Conservation and Management) Rules, 2017.
    - As of December 2021, there are 47 Ramsar Sites in India.
- **Montreux Record:**
    - Montreux Record under the Convention is a register of wetland sites on the List of Wetlands of International Importance w**here changes in ecological character have occurred, are occurring, or are likely to occur** as a result of technological developments, pollution, or other human interference. **Hence statement 1 is correct**.
    - It is maintained as part of the Ramsar List.
    - The Montreux Record was established by Recommendation of the Conference of the Contracting Parties (1990).
    - Sites may be added to and removed from the Record only with the approval of the Contracting Parties in which they lie.
    - At present, two wetlands of India are in Montreux Record: **Keoladeo National Park (Rajasthan) and Loktak Lake (Manipur). Hence statement 2 is not correct.**
    - Loktak was included in the Montreux Record in 1993 as a result of ecological problems such as deforestation in the catchment area, siltation, infestation of water hyacinth and paragrass, and pollution.
    - Keoladeo was placed on the Montreux Record in 1990 due to "water shortage and an unbalanced grazing regime". Additionally, the invasive growth of the grass Paspalum distichum has changed the ecological character of large areas of the site, reducing its suitability for certain waterbird species, notably the Siberian crane.
- In 1993, Chilika Lake was also listed in Montreux Record due to problem of siltation. Later in 2002, it was removed from the list as the problem of siltation was tackled by Govt. of India. Chilika Development Authority received Ramsar Wetland Conservation Award for 2002.

Q 32.D

- The term "Satvahana" originated from the Prakrit which means " driven by seven" which is an implication of the Sun God's chariot that is driven by seven horses as per Hindu mythology.
- **The Satavahans claimed to be Brahmanas** and worshipped gods like Vasudeva Krishna. The Satavahanas were also the **first rulers to make land grants to Brahmanas. The Satavahana rule is accepted to exist between mid-first Century BCE and third century CE. Hence statement 1 is not correct.**
    - They **also patronized Buddhism** by granting land to the monks. In their kingdom, the **Mahayana form of Buddhism** commanded a considerable following, especially amongst the artisan class.
- The Satavahana kingdom majorly comprised present Andhra Pradesh, Maharashtra and Telangana. At times, their rule also included parts of Gujarat, Karnataka as well as Madhya Pradesh.
    - The kingdom had different capitals at different times. **Two of the capitals were Amaravati and Pratishthana (Paithan)**.
- The earliest inscriptions of the Satavahans belong to the first century BCE when they defeated the Kanvas and established their power in parts of Central India.
- Their **greatest competitors were the Shaka Kshatrapas of western India,** who had established themselves in the upper Deccan and western India.
- The first king of the Satavahana dynasty was Simuka.
- **The Satavahanas show traces of a matrilineal social structure. It was customary for their king to be named after his mother. Such names as Gautamiputra and Vashishthiputra indicate that in their society the mother enjoyed a great deal of importance.** Sometimes an inscription is issued both under the authority of the king and his mother. But succession to the throne passed to the male member. So, the social structure was only partially matrilineal. **Hence statement 3 is correct.**
- **The official language of Satavahanas was Prakrit. All inscriptions were composed in Prakrit and written in the Brahmi script. Hence statement 2 is not correct.**
- **Satavahana Coins:** The coins of the Satavahanas have been excavated from Deccan, western India, Vidarbha, Western and Eastern Ghats, etc.
    - **Most of the coins in the Satavahana dynasty were die-struck. Cast-coins too existed** in the Satavahana empire and there were multiple combinations of techniques that were used to cast coins. **Hence statement 4 is correct.**

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- The **portrait coins** were mostly in silver and some were in lead too. Dravidian language and Brahmi script were used on portrait coins.
- There were **punch-marked coins** too that were circulated alongside the Satavahana dynasty.
- The importance of maritime trade was derived from the images of ships present on the Satavahana coins.
- Many Satavahana coins bore the names of 'Satakarni' and 'Pulumavi.'
- Satavahana coins were of different shapes – round, square, rectangular, etc.
- Many symbols have appeared on the Satavahana coins, the major ones of which are: chaitya symbol, chakra, conch shell symbol, lotus, swastik, ship, animal motifs etc.

- The **Naneghat inscriptions** in the Naneghat caves indicate that they are the work of Satavahana rulers who came into prominence after the fall of the Mauryan empire. It is believed that a powerful woman ruler Naganika, the wife of Satakarni (180–170 BCE) of the Satavahana family commissioned the cave, the statues, and the inscriptions. Inscriptions in the cave mention her and her family members. The central figure of the inscription is Naganika, perhaps the first woman in India's recorded history who has determined the political affairs of a state, even having her own coinage.

Q 33.B

- **About two thirds of the WTO's around 164 members are developing countries.** They play an increasingly important and active role in the WTO because of their numbers, because they are becoming more important in the global economy, and because they increasingly look to trade as a vital tool in their development efforts. Developing countries are a highly diverse group often with very different views and concerns.
- **There are no WTO definitions of "developed" and "developing" countries. Members announce for themselves whether they are "developed" or "developing" countries. However, other members can challenge the decision of a member to make use of provisions available to developing countries. Hence statement 1 is not correct and statement 2 is correct.**
- Developing country status in the WTO brings **certain rights**. There are for example provisions in some WTO Agreements which provide developing countries with **longer transition periods** before they are required to fully implement the agreement and developing countries can receive technical assistance.
- The WTO agreements contain special provisions on developing countries such as
- **The Committee on Trade and Development** is the main body focusing on work in this area in the WTO, with some others dealing with specific topics such as trade and debt, and technology transfer
- The **WTO Secretariat provides technical assistance** (mainly training of various kinds) for developing countries.
- The **WTO Secretariat has special legal advisers for assisting developing countries in any WTO dispute and for giving them legal counsel.** The service is offered by the WTO's Training and Technical Cooperation Institute. Developing countries regularly make use of it.
- Provisions designed to increase developing countries' **trading opportunities through greater market access** (e.g. in textiles, services, technical barriers to trade)
- Provisions requiring WTO members to **safeguard the interests of developing countries when adopting some domestic or international measures** (e.g. in anti-dumping, safeguards, technical barriers to trade)
- Provisions for **various means of helping developing countries (**e.g. to deal with commitments on animal and plant health standards, technical standards, and in strengthening their domestic telecommunications sectors).

Q 34.D

- **National Forest Policy,1988:** The National Forest Policy of 1988 was launched with the principal aim of ensuring environmental stability and maintenance of ecological balance, including atmospheric equilibrium which is essential for the sustenance of all life forms - plant, animal, and human. The basic objectives that should govern the National Forest Policy - are the following:
  - Maintenance of environmental stability through preservation and, where necessary, restoration of the ecological balance that has been adversely disturbed by serious depletion of the forests of the country.
  - Conserving the natural heritage of the country by preserving the remaining natural forests with the vast variety of flora and fauna, which represent the remarkable biological diversity and genetic resources of the country.
  - **Checking soil erosion and denudation in the catchment areas of rivers, lakes, reservoirs in the "interest of soil and water conservation, for mitigating floods and droughts and for the retardation of siltation of reservoirs. Hence option 1 is correct.**

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tracts. **Hence option 2 is correct.**
    - Increasing substantially the forest/tree cover in the country through massive afforestation and social forestry programs, especially on all denuded, degraded, and unproductive lands.
    - Meeting the requirements of fuel-wood, fodder, minor forest produce, and small timber of the rural and tribal populations.
    - Increasing the productivity of forests to meet essential national needs.
    - **Encouraging efficient utilization of forest produce and maximizing substitution of wood. Hence option 4 is correct.**
    - **Creating a massive people's movement with the involvement of women, for achieving these objectives and to minimize pressure on existing forests. Hence option 3 is correct.**

Q 35.C

- The Samkhya School of Philosophy is perhaps the oldest of the six systems, being mentioned in the Bhagavad Gita and occurring in a primitive form in the Upanisads.
- **Kapila is described as the legendary founder of the school.**
- Samkhya has a detailed ontology (a theory of being) and epistemology. It holds that the world we see around us really exists.
- **Two fundamental categories in Samkhya thought are purusha (the spiritual principle) and prakriti (matter or nature). There are supposed to be many purushas, all of them eternal, unchanging, passive, and conscious witnesses.**
- Prakriti, on the other hand, is eternal and unchanging, but also active and unconscious. It has three gunas or qualities—sattva (goodness), rajas (energy or passion), and tamas (darkness or inertia).
- According to early Samkhya philosophy the presence of divine agency is not essential to the creation of the world. The world owes its creation and evolution more to Nature or Prakriti than to God. This was a rational and scientific view. Around the fourth century A.D. in addition to Prakriti, Purusha or spirit was introduced as an element in its system, and the creation of the world was attributed to both.
- **Liberation consists of the purusha realizing its distinction from prakriti.**
- The Samkhya system also talks of other categories such as buddhi (will and the discriminating faculty), ahamkara (I-ness, the ego), and mind. Samkhya considers perception and reliable testimony as valid bases of knowledge, and attaches a great deal of importance to inference.
- **Hence option (c) is the correct answer.**

Q 36.D

- The third Schedule contains the Forms of Oaths or Affirmations for the following office bearers:
    - Union Ministers of India
    - Union Ministers of a State
    - Parliament Election Candidates
    - Members of Parliament (MPs)
    - Supreme Court Judges
    - Comptroller and Auditor General
    - State Ministers
    - State Legislature Elections' Candidates
    - State Legislature Members
    - High Court Judges
    - **Hence option (d) is the correct answer.**

Q 37.A

- The jute industry in India is 150 years old. There are about 70 jute mills in the country, of which about 60 are in West Bengal along both the banks of river Hooghly.
- **India is the world's biggest producer of jute, followed by Bangladesh.** Jute is primarily grown in West Bengal, Odisha, Bihar, Assam, Meghalaya, Tripura and Andhra Pradesh. Jute production is a labour-intensive industry. **Hence, statement 1 is correct.**
- Jute is the second most abundant natural fibre in the world. It has high tensile strength, acoustic and thermal insulation, breathability, low extensibility, ease of blending with both synthetic and natural fibres, and antistatic properties.

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protect the jute sector from the plastic packaging segment. The Government under this act specifies the commodities and the extent to which they are mandatorily packed in Jute Packaging Materials.

- The Cabinet Committee on Economic Affairs chaired by Prime Minister has approved that 100% of the foodgrains and 20% of the sugar shall be mandatorily packed in diversified jute bags. **For the current jute year 2020-21, 100% of the foodgrains and 20% of sugar are required to be mandatorily packed in jute bags. Hence, statement 2 is not correct.**

Q 38.B

- The Emissions Gap Report is an annual report on greenhouse gas emissions and climate change published by the **United Nations Environment Program. Hence statement 1 is not correct.**
- Each year, the Emissions Gap Report assesses the gap between anticipated emissions and levels consistent with the Paris Agreement goals of limiting global warming this century to well below 2°C and pursuing 1.5°C.
- This difference between **"where we are likely to be and where we need to be" is known as the emissions gap. Hence statement 2 is correct.**

Q 39.B

- After independence there was a growing demand for reorganisation of the States on more rational basis in the context of not only from financial, economic and administrative management of independent India but also due to the growing importance of regional languages.
- For the first time, the States Reorganisation Commission (SRC) was constituted in 1953 to go into this problem and to recommend the principles and broad guidelines on which the States can be reorganised. The Commission submitted its report in September, 1955.
- The Commission was appointed by Prime Minister Jawahar Lal Nehru. SRC was **headed by S. Fazal Ali** and had two members namely M. Panikkar & H. N. Kunzru
- To give effect to the scheme of reorganisation which emerged from the consideration of the proposals contained in the Report, **the States Reorganisation Act, 1956, was enacted by the Parliament under Article 3 of the Constitution of India.**
- The Constitution(7th Amendment) Act, 1956 – implemented the scheme of States reorganisation. It has **added Article 350 A** which is designed to implement one of the States Reorganisation Commission's important recommendations regarding safeguards for linguistic minorities in the States after reorganisation.
- The new States formed as a result of the reorganisation of States in 1956 are Andhra Pradesh, Bombay, Kerala, Madhya Pradesh, Madras, Mysore, Punjab and Rajasthan.
- SRA, 1956 also provided for the following:
  - Amendment to First & Fourth Schedule
  - Provision of High Courts for the new States
  - Zonal Council
  - Delimitation of Constituencies
  - All India Services
  - Services under State Public Service Commission
  - **Hence option (b) is the correct answer.**

Q 40.C

- The Constitution has conferred a very extensive jurisdiction and vast powers on the Supreme Court.
- **Original Jurisdiction:**
  - As a federal court, the Supreme Court decides the disputes between different units of the Indian Federation. More elaborately, any dispute between:
    - the Centre and one or more states; or
    - the Centre and any state or states on one side and one or more states on the other; or
    - between two or more states.
  - In the above federal disputes, the Supreme Court has exclusive original jurisdiction. Exclusive means, no other court can decide such disputes and original means, the power to hear such disputes in the first instance, not by way of appeal.

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        - **A dispute arising out of any pre-Constitution treaty, agreement, covenant, engagement, sanad or other similar instrument. Hence statement 1 is not correct.**
        - A dispute arising out of any treaty, agreement, etc., which specifically provides that the said jurisdiction does not extent to such a dispute.
        - Inter-state water disputes.
        - Matters referred to the Finance Commission.
        - Adjustment of certain expenses and pensions between the Centre and the states.
        - Ordinary dispute of Commercial nature between the Centre and the states.
        - Recovery of damages by a state against the Centre.
- **Appellate Jurisdiction:**
    - The Supreme Court is primarily a court of appeal and hears appeals against the judgements of the lower courts. It enjoys a wide appellate jurisdiction. The Appellate jurisdiction of the Supreme Court may be divided under three heads:
        - **Cases involving interpretation of the Constitution-civil, criminal or otherwise. Hence statement 2 is correct.**
        - Civil cases, irrespective of any constitutional question.
        - Criminal cases, irrespective of any constitutional question.
- **Appeal by Special Leave:**
    - The Supreme Court is authorised to grant in its discretion special leave to appeal from any judgement in any matter passed by any court or tribunal in the country (except military tribunal and court martial). This provision contains the four aspects as under:
        - It is a discretionary power and hence, cannot be claimed as a matter of right.
        - It can be granted in any judgement whether final or interlocutory.
        - **It may be related to any matter—constitutional, civil, criminal, income- tax, labour, revenue, advocates, etc.. Hence statement 3 is not correct.**
        - It can be granted against any court or tribunal and not necessarily against a high court (of course, except a military court).

Q 41.A

- **As per Code on Industrial Relations, 2020, any establishment having at least 300 workers will be required to seek prior permission of the government before closure, lay-off, or retrenchment. Hence option (a) is the correct answer.**
    - Lay-off refers to an employer's inability to continue giving employment to a worker in the face of adverse business conditions.
    - Retrenchment refers to the termination of service of a worker for any reason other than disciplinary action.
- **Construction work:** No employer can hire workers with defective vision, deafness, or a tendency for giddiness, if there is a risk of accident.
- **Mines:** No worker below the age of 18 or apprentice/trainee below the age of 16, may work in a mine.
- Central Government has developed **e-SHRAM portal** which will be a centralized database of unorganized workers seeded with Aadhaar. After registering, he/she will get an Accidental Insurance cover of 2 Lacs under PMSBY.
    - In future, all the social security benefits of unorganized workers will be delivered through this portal. In emergency and national pandemic like situations, this database may be utilized for assistance.

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Table 1: Comparison between fixed term employment, permanent employment and contract labour

Feature	Fixed Term Employee	Permanent Employee	Contract Labour
Type of employment	• Employment under written contract. No contractor or agency is involved. • On the payroll of the establishment.	• Employment directly under a written contract. • On the payroll of the establishment.	• Engaged in an establishment through a contractor or agency. • Not on the payroll of the establishment.
Term	• Stipulated fixed term. • Employment lapses on completion of term, unless renewed. No notice is required to be given for retrenchment.	• Employed on a permanent basis • Notice has to be given for termination of employment.	• Based on terms negotiated with the contractor.
Nature of work	• Not specified.	• Hired for routine work.	• Employment may be prohibited in certain cases, e.g., if similar work is carried out by regular workmen.

Q 42.D

- A **plantation** is a large-scale farm that specializes in cash crops.
- The **term Plantation crops** refers to those crops which are usually cultivated as a single crop on an extensive scale in a large contiguous area, owned and managed by an Individual or a company.
- These plantation crops are high-value commercial crops of greater economic importance.
- The crops include **tea, coffee, rubber, cocoa, coconut, areca nut, oil palm, cashew, cinchona etc.**
- **Hence option (d) is the correct answer.**

Q 43.A

- In 1665, Robert Hook discovered a cell. Some cells have membrane-bound organelles and some do not have. Depending upon the internal structure of the cell, two types of cells are found in an organism namely Eukaryotic and Prokaryotic.
- Prokaryotic cells are the most primitive cells. They do not have a definite nucleus which includes bacteria and cyanobacteria (blue-green algae). The chromatin bodies remain scattered inside the cytoplasm. In prokaryotes, asexual division occurs basically binary fission. **Membrane-bound cell organelles are absent in Prokaryotes. Hence, statement 3 is not correct.**
- Eukaryotes are characterised by their membrane nucleus. They contain organelles like mitochondria bounded by membranes and are located in the cytoplasm. They have a definite nucleus. The chromatin bodies are enclosed by a nuclear membrane. Both asexual and sexual division occurs in eukaryotes. They are larger than prokaryotes and show better structural organisation and increased functional efficiency than prokaryotes.
- Key differences between Prokaryotic and Eukaryotic Cells:
    - **Prokaryotic cells are generally small (1-10 µm) and Eukaryotes large (5-100 µm). Hence, statement 1 is correct.**

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eukaryotes.
    - Prokaryotic cells also lack most of the other cytoplasmic organelles present in eukaryotic cells.
    - **Prokaryotic Cell has a single chromosome whereas Eukaryotic cell has more than one chromosome. Hence, statement 2 is not correct.**

Q 44.A

- **Tanjore Painting is characterised by bold drawing, techniques of shading and the use of pure and brilliant colours** flourished at Tanjore in South India during the late 18th and 19th centuries. **Hence, statement 1 is correct.**
- **Tanjore Painting is an interesting combination of art and craft that grew in the region of Thanjavur, Tamil Nadu under Maratha influence. Hence, statement 3 is correct.**
- The main colours are red, yellow, black, and white. The distinctive features were aristocratic or religious figures adorned with jewellery and surrounded by elaborate architectural arches and doorways. Originally done on wood, it is encrusted with semi-precious stones. Later the paintings were executed on glass.
- **The style is decorative and is marked by the use of bright colours and ornamental details.** The conical crown appearing in the miniature is a typical feature of the Tanjore painting. **Hence, statement 2 is correct.**

Q 45.B

- Witness Protection Scheme, 2018 provides for protection of witnesses based on the threat assessment and protection measures inter alia include protection/change of identity of witnesses, their relocation, installation of security devices at the residence of witnesses, usage of specially designed Court rooms, etc.
- The Scheme provides for three categories of witness as per threat perception:
    - Category 'A': Where the threat extends to life of witness or his family members, during investigation/trial or thereafter.
    - Category 'B': Where the threat extends to safety, reputation or property of the witness or his family members, during the investigation/trial or thereafter.
    - Category 'C': Where the threat is moderate and extends to harassment or intimidation of the witness or his family member's, reputation or property, during the investigation/trial or thereafter.
    - **Hence statement 1 is not correct.**
- The Scheme provides for a State Witness Protection Fund for **meeting the expenses of the scheme.** This fund shall be operated by the **Department/Ministry of Home under State/UT Government** and shall comprise of the following:
    - Budgetary allocation made in the Annual Budget by the State Government;
    - Receipt of amount of costs imposed/ ordered to be deposited by the courts/tribunals in the Witness Protection Fund;
    - Donations/ contributions from Philanthropist/ Charitable Institutions/ Organizations and individuals permitted by the Government.
    - Funds contributed under Corporate Social Responsibility.
    - **Hence statement 2 is correct.**
- The Hon'ble Supreme Court of India in its Judgment dated 05.12.2018 in Writ Petition (Criminal) No. 156 of 2016 has endorsed the Scheme.
    - As per Article 141/142 of the Constitution, the Witness Protection Scheme, 2018 endorsed in the said Judgment of the Supreme Court is binding on all Courts within the territory of India and **enforceable in all States and Union Territories. Hence statement 3 is correct.**

Q 46.D

- **NHB RESIDEX, India's first official housing price index, was an initiative of the National Housing Bank (NHB) undertaken at the behest of the Ministry of Finance, Government of India.**
- The index was formulated under the guidance of a **Technical Advisory Committee (TAC)** comprising of stakeholders from the housing market. It was launched in July 2007 and updated periodically till March 2015, taking 2007 as the base year.
- With a view to making the NHB RESIDEX more current and up-to-date with the prevailing macro-economic scenario, NHB undertook a review of the processes and methodology used for computation of the index along with the base year and segmentation used.
- Thereafter revamped NHB RESIDEX with larger scope and wider geographical coverage was published. This index is computed taking FY2012-13 as the base year and is updated up to March 2018.

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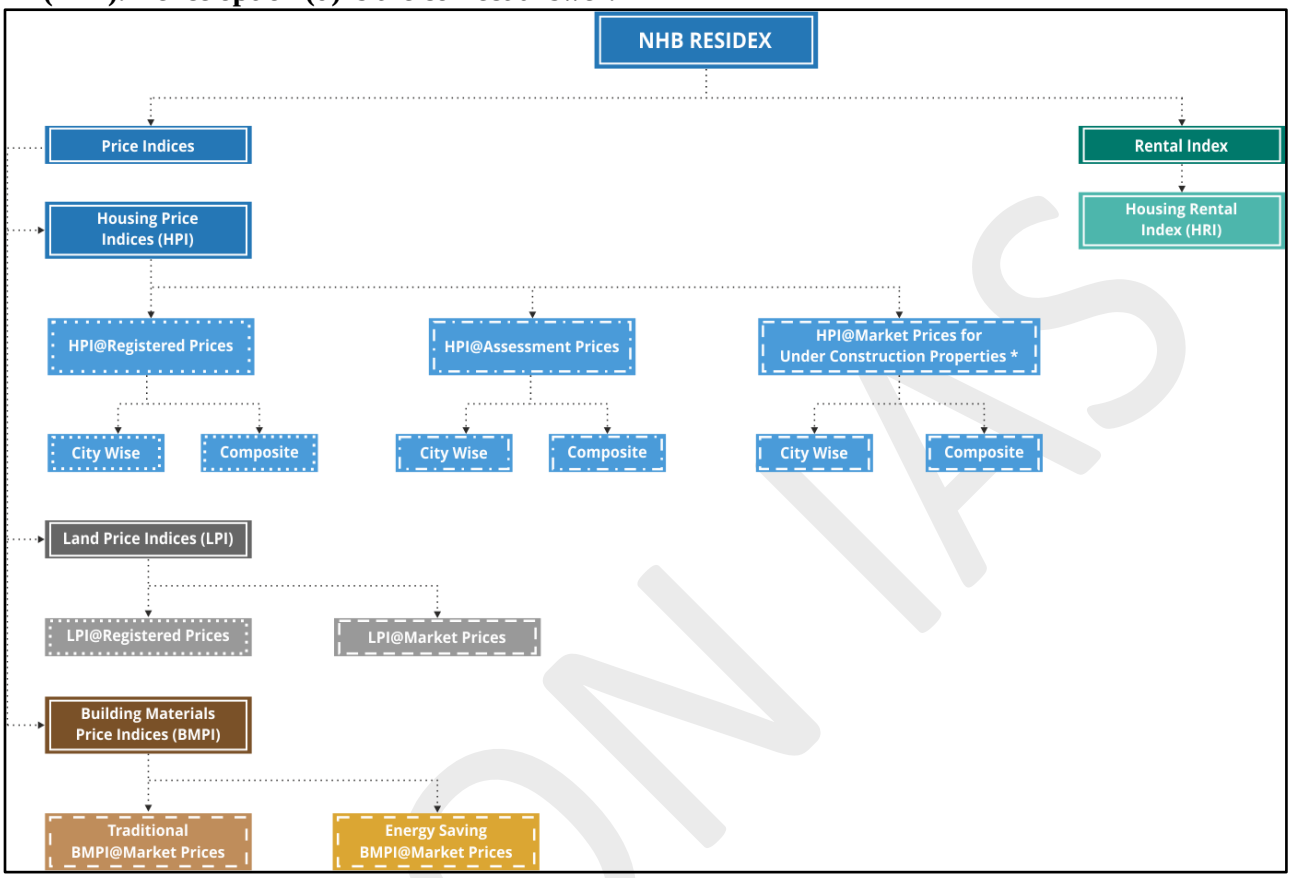
and is updated up to the current quarter. In order to maintain continuity in the time series data, **NHB RESIDEX 2012-13** series subsequent to change in base year has been calculated using backward linking factor.

- **The scope has been widened under NHB RESIDEX brand, to include housing price indices (HPI), land price indices (LPI) and building materials price indices (BMPI), and also housing rental index (HRI). Hence option (d) is the correct answer.**



Q 47.C

- The Nobel Prize in Chemistry 2021 was awarded to Benjamin List and David MacMillan for the development of a precise new tool for molecular construction: organocatalysis.
- Catalysts are substances that control and accelerate chemical reactions, without becoming part of the final product
- Significance of these discoveries:
  - Organic catalysts have a stable framework of carbon atoms and often contain common elements such as oxygen, nitrogen, sulphur or phosphorus. **Thus these catalysts are both environmentally friendly and cheap to produce. Hence, statement 1 is correct.**
  - Organic catalysts can be used to drive multitudes of chemical reactions. Using these reactions, researchers can now more efficiently **construct anything from new pharmaceuticals to molecules that can capture light in solar cells. Hence, statement 2 is correct.**
  - Catalysts help in the production of varied products like pharmaceuticals, plastics, perfumes and food flavourings. It is estimated that 35 per cent of the world's total GDP in some way involves chemical catalysis.

Q 48.C

- Foreign Investment means any investment made by a person resident outside India on a repatriable basis in capital instruments of an Indian company or to the capital of an LLP.
- **Foreign Direct Investment (FDI) is the investment through capital instruments by a person resident outside India**
  (a) in an unlisted Indian company or
  (b) in 10 percent or more of the post-issue paid-up equity capital on a fully diluted basis of a listed Indian company.

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sources of conversion are exercised.

- **Foreign Portfolio Investment is any investment made by a person resident outside India in capital instruments where such investment is (a) less than 10 percent of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company or (b) less than 10 percent of the paid-up value of each series of capital instruments of a listed Indian company.**
- Singapore has been the largest source of FDI in India in the last three years. In 2020-21 it stood at nearly 16 billion dollars.
  - **Hence, statement 1 is not correct.**
- **FDI has increased continuously in India in the last five years despite the corona pandemic.**

(US$ million)

2016-17	2017-18	2018-19	2019-20	2020-21 (P)
2	3	4	5	6
36,317	37,366	38,744	42,629	52,545

  - **Hence, statement 2 is correct.**
- FDI in India is prohibited in the following sectors :
  - Lottery Business including Government/private lottery, online lotteries, etc.*
  - **Gambling and Betting including casinos***
  - **Chit Funds**
    - **Hence, statement 3 is correct.**
  - Nidhi Company
  - Trading in Transferable Development Rights (TDR)
  - Real Estate Business or Construction of farmhouses
    - Real estate business shall not include development of town shops, construction of residential/ commercial premises, roads or bridges and Real Estate Investment Trusts (REITs) registered and regulated under the SEBI (REITs) Regulations, 2014
  - Manufacturing of cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes
  - Sectors not open to private sector investment- atomic energy, railway operations (other than permitted activities mentioned under the Consolidated FDI policy)

Q 49.B

- The governor is neither directly elected by the people nor indirectly elected by a specially constituted electoral college as is the case with the president.
- **Article 156**: A governor holds office for a term of five years from the date on which he enters upon his office. However, this **term of five years** is subject to the pleasure of the President. Further, he can resign at any time by addressing a resignation letter to the President.
- The Constitution lays down only two qualifications for the appointment of a person as a governor. These are:
  - He should be a citizen of India.
  - He should have completed the age of 35 years.
    - The minimum age requirement for a person to be chosen as a member of the state legislature is 25 years.
- The Governor **has no emergency powers** to meet the situation arising from external aggression or armed rebellion as the President has [Art. 352(1)], but he has the power to make a report to the President whenever he is satisfied that a situation has arisen in which Government of the State cannot be carried on in accordance with the provisions of the Constitution. **Hence option (b) is the correct answer.**
- The relation between the Governor and his ministers is similar to that between the President and his ministers, with this important difference that while the **Constitution does not empower the President to exercise any function 'in his discretion', it authorises the Governor to exercise some functions 'on his discretion'**. In this respect, the principle of Cabinet responsibility in the States differs from that in the Union.
- Article 217(1): Every Judge of a High Court shall be appointed by the President by warrant under his hand and seal after consultation with the Chief Justice of India, the **Governor of the State.**

Q 50.B

- **Prosopis Juliflora : Prosopis juliflora (P juliflora), an exotic tree, is one of the top invaders in India. A native of South and Central America, it was introduced in India to meet the fuel wood requirement of the rural poor and to restore degraded lands.**

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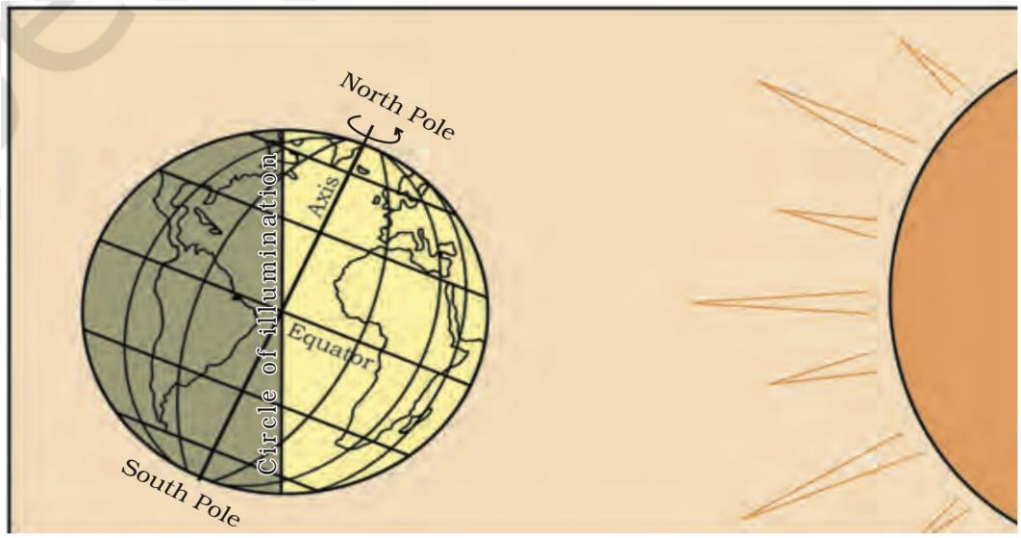
that deserts and grasslands were wastelands and hence needed trees. It depletes Groundwater.

- **Lady's slipper orchids:** It is a genus of about 50 species of perennial, terrestrial orchids. The herbaceous stems and leaves of the various species grow from a few centimeters to over 1 m in height and die back to a usually short and thick underground rhizome during the winter.
  - The root was formerly much used in North America both by indigenous and immigrant peoples for its sedative and antispasmodic properties and to counter insomnia and nervous tension
  - Lady's slippers are used medicinally in the Old World. In Asia preparations of Cypripedium are **considered analgesic, diaphoretic, diuretic, detumescent and nervine**. The stems, rhizomes, and flowers of various species are used variously in China as sedatives and vascular aids, to stimulate appetite, relieve rheumatic pain and treat edema of the legs, dropsy, dysentery, gastritis, gonorrhea, headaches, leucorhhea, fractures and mental disorders.
- **Red Vanda:**
  - An endangered species, Red Vanda is restricted to the **State of Manipur and neighbouring areas in NE India.** It grows on small shrubs and trees at elevations of 300-500 m flowering during spring. It is one of the loveliest species in India with limited distribution. Red Vanda is renowned for its bright crimson flowers with red spots on a pale orange background of its dorsal sepal and petals. The long, branching inflorescence bearing more than 20 flowers is remarkably beautiful. Flowering: April-September. during April and May.
  - Traditional uses are usually **for treating rheumatism, dyspepsia, indigestion, piles, wounds, bronchitis, and hepatitis.**
- **Four O'clock Flowers:**
  - Four o'clock flowers grow and bloom abundantly in the summer garden. **Blooms open in the late afternoon and evening, hence the common name "four o'clock.**" Highly fragrant in a range of colors, the four o'clock plant sports attractive flowers that attract butterflies, bees, and hummingbirds.
  - Many varieties of the flower exist, including some that are **native to the United States**. **Native Americans grew the plant for medicinal properties. Hence option (b) is the correct answer.**
- **Till now, only Blue Vanda, Red Vanda and Ladies slipper orchids have been included under Schedule VI of the Wild (Life) Protection Act, 1972, restricting collection from forests. Hence option (b) is the correct answer.**

Q 51.C

- The axis of the earth which is an imaginary line, makes an angle of 66½° with its orbital plane. The plane formed by the orbit is known as the orbital plane.
  - The earth receives light from the sun. Due to the spherical shape of the earth, only half of it gets light from the sun at a time. The portion facing the sun experiences day while the other half away from the sun experiences night.
  - The circle that divides the day from night on the globe is called the circle of illumination. This circle does not coincide with the axis. **Hence statement 1 is not correct.**



- On 21st March and September 23rd, direct rays of the sun fall on the equator. At this position, neither of the poles is tilted towards the sun; so, the whole earth experiences equal days and equal nights. This is called an equinox. **Hence statement 2 is not correct.**

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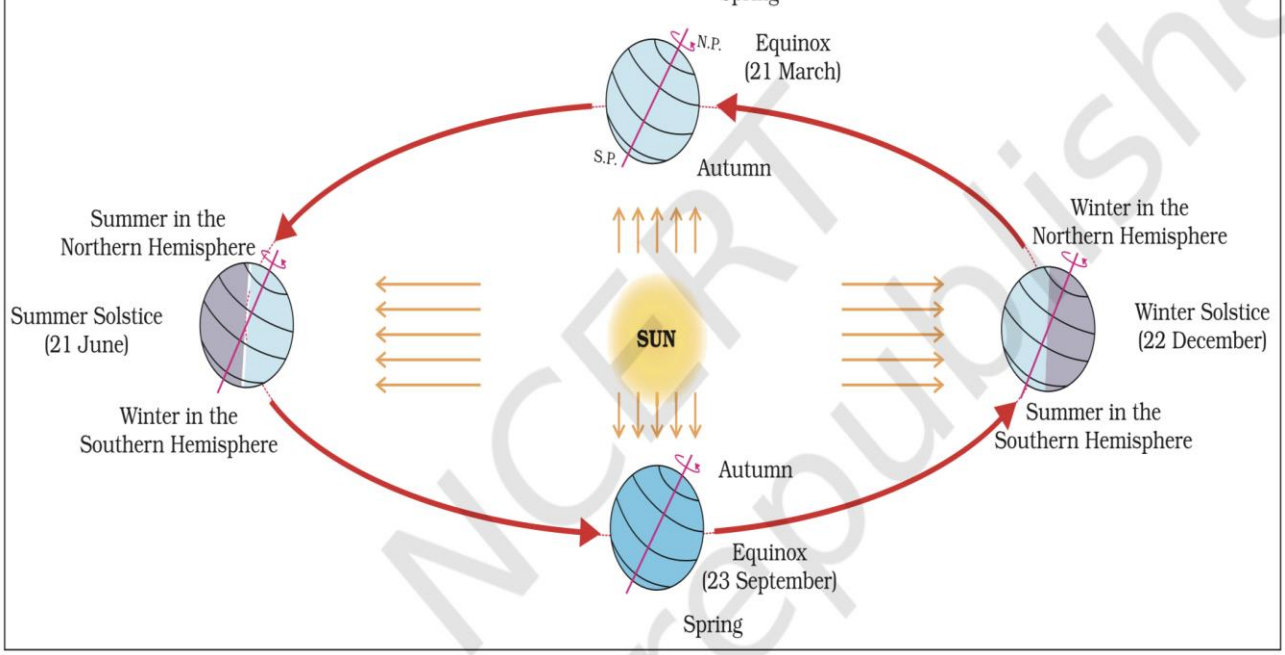

- The speed of earth's rotation at the equator is 1660 km per hour (circumference of the earth is 40,077 km, which is covered in 24 hours). The speed decreases towards the poles. **Hence statement 3 is correct.**

Q 52.B

- An Election petition is a procedure for inquiring into the validity of the election results of Parliamentary or local government elections. In other words, it is a means under law to challenge the election of a candidate in a Parliamentary, Assembly or local election.
- All doubts and disputes in connection with election of the President are inquired into and **decided by the Supreme Court** whose decision is final. **Hence statement 1 is not correct.**
- **A person who is neither a candidate nor an elector can not file a suit challenging the validity of the election of the President** (N.B. khare v. Election Commissioner of India, 1985). **Hence statement 2 is correct.**
- The election of a person as President cannot be challenged on the ground that the electoral college was incomplete (i.e. existence of any vacancy among the members of electoral college).

Q 53.D

- The term Mahayana is a **Sanskrit word** which literally means **"Great Vehicle"**. It is one of the two main schools of Buddhism. This school is **more liberal and believed in the heavenliness of Buddha** and **Bodhisattvas embodying Buddha Nature.**
  - The ultimate goal under Mahayana is "**spiritual upliftment".** They believed in universal liberation from suffering for all beings (hence the "Great Vehicle").
  - The Mahayana followers **believed in idol or image worship of Buddha**. **Hence option (a) is not correct.**
  - Emperor **Ashoka patronised Hinayana sect** as Mahayana school came into being much later.
  - The concept of Bodhisattva is the result of Mahayana Buddhism. Chief of Bodhisattvas is **Avalokitesvara** also called **Padampani.**
  - Mahayana is also called "**Bodhisattvayana", or the "Bodhisattva Vehicle**. That is to say, the followers believe in Bodhisattva concept of salvation of all conscious individual. In other words, t**hey believe in universal liberation from suffering of all beings. A bodhisattva seeks complete enlightenment for the benefit of all beings. Hence option (b) is not correct.**
  - A bodhisattva who has accomplished this goal is called a **Samyaksaip buddha**.
  - Prominent Mahayana texts include **Lotus Sutra, Mahavamsa**, etc.
  - Mahayana school believes in **ten great spiritual perfections (or paramitas**) to be followed by an individual. **Hence option (d) is the correct answer.**
  - **The Mahayana scholars predominantly used Sanskrit as a language.**
- **The concept of Vibhajjavada** i.e. "teaching of analysis" is related to **Theravada** Buddhism **(a sub sect of Hinayana). Hence option (c) is not correct.**

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as per 2010 report) Other countries following it includes Nepal, Bangladesh, Japan, Vietnam, Indonesia, Malaysia, Singapore, Mongolia, China, Bhutan, Tibet, etc.

Q 54.B

- Space-based Internet systems have, in fact, been in use for several years now — but only for a small number of users. Also, most of the existing systems use satellites in geostationary orbit. This orbit is located at a height of 35,786 km over the Earth's surface, directly above the Equator.
- American company SpaceX recently sent 60 small satellites (under 500 kg each) into Low Earth Orbit (LEO). This project, named Starlink network, seeks to build a 42,000-strong constellation aiming to supply nonstop, low-cost Internet everywhere on Earth.
- Space-based internet systems using satellites in Low Earth orbit (LEO) Vis-à-vis Geostationary Earth orbit (GEO):
    - Satellites in geostationary orbit also have a major disadvantage. **There is a time lag called latency of about 600 milliseconds between a user seeking data, and the server sending that data.** This is because they are placed at a distance of ~36000 km. The longer the distance that needs to be covered the greater is the time lag, or latency. **On the other hand, a satellite in the lower orbit, 200-2,000 km from the Earth's surface, can bring the lag down to 20-30 milliseconds. Hence statement 1 is correct.**
    - One big advantage of beaming signals from geostationary orbit is that the satellite can cover a very large part of the Earth. **Signals from one satellite can cover roughly a third of the planet — and three to four satellites would be enough to cover the entire Earth.** On the other hand, Starlink network, seeks to build a 42,000-strong constellation to cover the entire Earth. **Therefore, area covered is comparatively very** less in case of satellites in LEO. **Hence statement 2 is not correct.**
    - Satellites in GEO stay constantly above one particular place over Earth. This enables an antenna on Earth to be fixed to always stay pointed towards that satellite without moving. **Thus it is easier to link them to ground stations.** This is not the case with satellites in LEO as they are moving with speed double the speed of satellites in geostationary orbit — about 27,000 km per hour and are not stationary. Hence, difficult to link to ground stations. **Hence statement 3 is not correct.**
- **Hence, option (b) is correct.**

Q 55.D

- A proclamation of emergency may be revoked by the President at any time by a subsequent proclamation. Such a proclamation does not require parliamentary approval.
- However, the President must revoke a proclamation if the **Lok Sabha passes a resolution disapproving its continuation**. Again, this safeguard was introduced by the 44th Amendment Act of 1978. Before the amendment, a proclamation could be revoked by the president on his own and the Lok Sabha had no control in this regard. **Hence statement 2 is not correct.**
- The 44th Amendment Act of 1978 also provided that, where **one-tenth of the total number of members of the Lok Sabha** give written notice to the **Speaker** (or to the **President** if the House is not in session), **a special sitting** of the House should be held **within 14 days** for the purpose of considering a resolution disapproving the continuation of the proclamation.
- **In Minerva Mills Ltd. v. Union of India,** the Supreme Court of India clarified that "Neither article 352 nor any other article of Constitution contains any provision saying that a proclamation of emergency validly issued under clause (1) shall cease to operate as soon as the circumstances warranting its issuance have ceased to exist. **Hence as long as the proclamation of emergency is not revoked by another proclamation, it would continue to be inoperative irrespective of change of circumstances. Hence statement 1 is not correct.**
- **A resolution of disapproval is different from a resolution approving the continuation of a proclamation in the following two respects:**
    - The first one is required to be passed by the Lok Sabha only, while the second one needs to be passed by the both Houses of Parliament.
    - The first one is to be adopted by a simple majority only, while the second one needs to be adopted by a special majority.

Q 56.B

- In the early part of the 20th century there organized temple entry movements by Dalits and lower castes gained momentum especially with the support of Mahatma Gandhiji for the same.

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by Sri Narayana Guru on Shivaratri day of 1888. On that auspicious day, Sri Narayana Guru defied the religious restrictions traditionally placed on the low caste Ezhava community and consecrated an idol of Shiva at Aravipuram.

- In 1919, T.K. Madhavan, a prominent social reformer and the Editor of Deshabhimani, the Malayalam newspaper, took up the issue of temple entry with the Travancore government. So did Kunju Panicker in 1920, and again Madhavan in 1921. But none of this had any results.
- Gandhiji, who was anguished by the 'very feeble response' of south Indian temples to reform efforts, agreed with Madhavan, during a meeting in 1921, that Kerala was ripe for a temple entry agitation. He insisted on peaceful protest and found there is "no swifter remedy than a real satyagraha properly handled.
- **On November 1, 1931, a large number of Dalits and upper-caste Hindus assembled in Guruvayur (Malabar) to demand that the lower castes be allowed inside the temple. The 10-month-long protest and fasting by K. Kelappan, popularly known as 'Kerala Gandhi' drew national attention to the temple entry movement. Hence, the first pair is not correctly matched.**
- **Munshiganj Kali temple satyagraha took place in Bengal in 1929. Hence, the second pair is correctly matched.**
- **Vaikom Satyagraha took place in the northern part of Travancore, in 1924. Though this struggle did not succeed in lifting the bar to lower castes, entering the Mahadeva Temple in the town, it managed to open the roads around the temple for their use. The temple entry movement gained momentum after this. Hence, the third pair is correctly matched.**

Q 57.B

- The element carbon occurs in different forms in nature with widely varying physical properties. Both diamond and graphite are formed by carbon atoms, the difference lies in the manner in which the carbon atoms are bonded to one another.
- I**n diamond, each carbon atom is bonded to four other carbon atoms thus making a perfect tetrahedron structure. In graphite, each carbon atom is bonded to three other carbon atoms in the same plane giving a hexagonal array. Hence, statement 1 is not correct.**
- **These two different structures result in diamond and graphite having very different physical properties even though their chemical properties are the same. Hence, statement 3 is correct.**
- **Diamond is the hardest substance known while graphite is smooth and slippery.** Graphite is also a very good conductor of electricity, unlike other non-metals. **Hence, statement 2 is correct.**
- Diamonds can be synthesised by subjecting pure carbon to very high pressure and temperature. These synthetic diamonds are small but are otherwise indistinguishable from natural diamonds.

Q 58.A

- **Option 1 is correct:** The **Indus river dolphin (Platanista gangetica minor)** is a freshwater dolphin that is found in the river Beas.
  - The Indus river dolphin is classified as Endangered by the International Union for the Conservation of Nature (IUCN).
  - Until recently, it was believed that these dolphins were endemic to Pakistan.
  - But in 2007, a remnant but viable population of Indus dolphins were discovered in **Punjab's Harike wildlife sanctuary and in the lower Beas river.**
- **Option 2 is correct:**
- **Option 3 is not correct: The hump-backed mahseer is a large freshwater fish also called the tiger of the water and found only in the Cauvery river basin (including Kerala's Pambar, Kabini and Bhavani rivers)**. It is now "Critically Endangered": more threatened than the tiger is, as per the International Union for Conservation of Nature's Red List of Threatened Species.
- Gharials reside exclusively in river habitats with deep, clear, fast-flowing waters and steep, sandy banks.The Gharial reintroduction in the Beas Conservation Reserve is an ambitious programme of Punjab.The reptiles were commonly sighted in the Beas River till the 1960s but later became extinct.The gharial can be found in north Indian rivers like the Ganga, Yamuna, Chambal and their tributaries.

Q 59.B

- **Recent Context:** Recently, the RBI decided to decided to undertake its own version of Operation Twist to bring down 10-year yields of government securities (G-sec) and drive monetary transmissions.
- 'Operation Twist' is RBI's simultaneous selling of short-term securities and buying of long term securities through open market operations (OMO). Under this mechanism, the short-term securities are transitioned into long-term securities. Whenever there is a long-term investment deficit in the country and the

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growth by lowering the interest rate for long-term investment ventures.

- The idea is that **by purchasing longer-term bonds, the RBI can help drive the bond prices up and yields down** (since prices and yields move in opposite directions). At the same time, selling shorter-term bonds should cause their yields to go up (since their prices would fall). In combination, these two actions twist the shape of the yield curve. Lower longer-term yields help boost the economy by making loans less expensive for those looking to buy homes, purchase cars, and finance projects, while saving becomes less desirable because it doesn't pay as much interest.
- RBI carried out the first phase of 'Operation Twist' on December 23, 2019, when it sold short-term securities worth Rs 10,000 crore and bought long-term securities worth the same value. **This operation involves buying and selling government securities simultaneously in order to bring down long-term interest rates and bolster short-term rates.**
- **Hence, option (b) is the correct answer.**

Q 60.D

- In 1944, during the height of the Bengal famine, and with the seeming inevitability of Independence, J.R.D. Tata and seven other industrialists and executives — G.D. Birla, Purushottam Das Thakurdas, Ardeshir Shroff, Kasturbhai Lalbhai, Ardeshir Dalal, John Matthai, and Lal Shri Ram — came together to write a manifesto on the future of the Indian economy post-Independence. This was known as the Bombay Plan, or more formally called "A Plan of Economic Development for India".
- **The planners argued for a 'mixed-economy' model, where the government would take control of 'basic industries,' and the private sector would take charge of 'consumer industries'.**
- **Hence, statement 1 is correct**
- The Bombay Plan aimed to express the authors' views on the post-Independence economy. It had the following components: a transition from agricultural domination to industrialization; the allocation of resources through centralized planning, and the division of industries into 'basic industries', dominated by the State, and 'consumer industries', left to the private sector.
- **The principal objective of the plan was "to bring about a doubling of the present per capita income within a period of fifteen years from the time the plan comes into operation," and increase production of power and capital goods.**
- **Hence, statement 2 is correct.**
- **It then went on to define a reasonable living standard, cost of housing, clothing and food to individuals, housing requirements, and the provision of essential infrastructure like sewage treatment, water and electricity.**
- **Hence, statement 3 is correct**
- It planned to achieve these aims in three 'leaps' spread over five years, analogous to the Five-Year Plans.
- The plan was well-received, with endorsements from FICCI, RBI Governor C.D. Deshmukh, and the viceroy, who in response to the plan document had established a Department of Planning and Development in 1944 (Tryst with Prosperity).

Q 61.A

- The Union list or List-1 contains 97 items and comprises of the subjects which are of national importance and admit of uniform laws for the whole of the country. And the legislative powers to legislate these matters are solely vested in the union parliament. The integral subjects which falls within the ambit of Union List are: Defense, Foreign Affairs, Currency and Coinage, War and Peace, Atomic Energy, National Resources, Railways, Post and Telegraph, Citizenship, Navigation and Shipping, Foreign Trade, Inter-State Trade and Commerce, Banking, Insurance, National Highways, Census, Election, Institutions of higher education and others.
- **Entry 63, List I of the Seventh Schedule** talks about 'Institutions of National Importance.
  - The institutions are known at the commencement of this Constitution as the **Banaras Hindu University,** the **Aligarh Muslim University,** and the **Delhi University**; the University established in pursuance of article 371E; any other institution declared by Parliament by law to be an institution of national importance.
  - **Hence option (a) is the correct answer.**

Q 62.A

- **Gandhi's Eleven Demands:** To carry forward the mandate given by the Lahore Congress, Gandhi presented eleven demands to the government and gave an ultimatum of January 31, 1930 to accept or reject these demands. The demands were as follows:

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1. Reduce expenditure on Army and civil services by 50 per cent.
2. Introduce total prohibition.
3. Carry out reforms in Criminal Investigation Department (CID).
4. Change Arms Act allowing popular control of issue of firearms licenses. **Hence, statement 2 is correct.**
5. Release political prisoners.
6. Accept Postal Reservation Bill.

- **Specific Bourgeois Demands**
  1. Reduce rupee-sterling exchange ratio to 1:4.
  2. Introduce textile protection. **Hence, statement 3 is not correct.**
  3. Reserve coastal shipping for Indians.
- **Specific Peasant Demands**
  1. Reduce land revenue by 50 per cent. **Hence, statement 1 is correct.**
  2. Abolish salt tax and government's salt monopoly.

- **Hence, option (a) is correct.**

Q 63.C

- Bhaskaracharya or Bhaskara II was one of the leading mathematicians in the 12th century AD. He has written a book called **Siddhanta Shiromani which deals with mathematics.** The book is divided into four volumes:
  - **LILAVATI** (deals with arithmetic)
  - **BEEJGANITA** (dealing with algebra)
  - **GOLADHYAY** (about spheres)
  - **GRAHAGANITA** (mathematics of planet)
- The **Chakrawat method or the cyclic method** to solve algebraic equations was introduced by him in his work Lilavati. **Hence statement 2 is correct.**
  - He also wrote another treatise named Karaṇā Kautūhala.
  - Bhaskara's **arithmetic text Līlāvatī** covers the topics of definitions, arithmetical terms, interest computation, arithmetical and geometrical progressions, plane geometry, solid geometry, the shadow of the gnomon, methods to solve indeterminate equations, and combinations. **Hence statement 1 is correct**

Q 64.A

- **The personality that is being described in the passage is King Mahendravarman I**. He was a Pallava king who ruled from 600 A.D to 630 A.D.
- He was a great builder of cave temples. The Mandagappattu inscription hails him as Vichitrachitta who constructed a temple for Brahma, Vishnu and Siva without the use of bricks, timber, metal and mortar.
- He built rock-cut temples in a number of places like Vallam, Mahendravadi, Dalavanur, Pallavaram, Mandagappattu and Tiruchirappalli.
- Mahendravarman I was also a great scholar in the Sanskrit language. He wrote the satirical drama Mattavilasa Prahasanam in Sanskrit.
- His title Chitrakarapuli reveals his talents in painting.
- He was an expert in playing Veena known as Parivathini. The music inscription at Kudumianmalai is ascribed to him.
- **Hence, option (a) is the correct answer.**

Q 65.D

- **Jet streams** are relatively narrow bands of strong wind in the **upper levels of the atmosphere.** All of Western and Central Asia remains under the influence of westerly winds along with an altitude of 9-13 km from west to east. These winds blow across the Asian continent at latitudes north of the Himalayas roughly parallel to the Tibetan highlands These are known as jet streams.
- By the middle of July, the Inter-Tropical **Convergence Zone (ITCZ)** shifts northwards, roughly parallel to the Himalayas between 20° N and 25° N. By this time, the westerly jet stream withdraws from the Indian region. Meteorologists have found an interrelationship between the **northward shift of the equatorial trough (ITCZ) and the withdrawal of the westerly jet stream from over the North Indian Plain.** It is generally believed that there is a cause-and-effect relationship between the two. **Hence statement 1 is correct.**

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movement of the sun. An **easterly jet stream**, called the tropical easterly jet stream **blows over peninsular India,** approximately over 14°N during the **summer** months. **Hence statement 2 is correct.**

- The easterly jet stream **steers the tropical depressions and cyclones** from the Pacific Ocean into the Indian Ocean and causes them to move **towards India.** These depressions play a significant role in the distribution of monsoon rainfall over the Indian subcontinent. **Hence statement 3 is correct.**

Q 66.A

- **Arts of the Indus Valley:**
  - **Dancing Girl:** Found **in Mohenjodaro**, this exquisite casting depicts a girl whose long hair is tied in a bun. Bangles cover her left arm, a bracelet, and an amulet or bangle adorn her right arm, a bracelet, and an amulet or bangle adorn her right arm, and a cowry shell necklaces are seen around her neck. Her right hand is on her hip and her left hand is clasped in a traditional Indian dance gesture.
  - **Bearded Priest: The stone statuaries found at Harappa and Mohenjodaro are excellent examples of handling three-dimensional volumes. In stone are two male figures—one is a torso in red sandstone and the other is a bust of a bearded man in soapstone—which are extensively discussed.** The figure of the bearded man, interpreted as a priest, is draped in a shawl coming under the right arm and covering the left shoulder. This shawl is decorated with trefoil patterns. The eyes are a little elongated, and half-closed as in meditative concentration. The nose is well formed and of medium.
  - **Painted Earthen Jar:** Found **in Mohenjodaro**, this jar is made on a potter's wheel with clay. The shape was manipulated by the pressure of the crafty figures of the potter. After baking the clay model, it was painted with black color. High polishing was done as a finishing touch. The motifs are of vegetals and geometric forms. Designs are simple but with a tendency towards abstraction.
  - **Mother Goddess:** This terracotta figure representing the large-sized mother goddess is one of the best-preserved and comes from **Mohenjodaro.**The mother goddess figures are usually crude standing female figures adorned with necklaces hanging over prominent breasts and wearing a loincloth and girdle. The fan-shaped headdress with a cup-like projection on each side is a distinct decorative feature of the mother goddess figures of the Indus valley. The pellet eyes and beaked nose of the figures are very crude, and the mouth is indicated by a slit.
  - The evidence of **fire worship has also been found at some sites such as Kalibangan and Lothal.** At Kalibangan, a series of raised brick platforms with pits containing ash and animal bones have been discovered. These are identified by many scholars as fire altars. T**his also shows that the Harappans living in different areas followed different religious practices as there is no evidence of fire-pits at Harappa or Mohanjodaro.**
- **Hence option (a) is the correct answer.**

Q 67.A

- Considered the repository of the Thar region's rich history and traditional knowledge**, the ballads, folklore and songs of the Langa-Manganiyar artistes are being preserved through an initiative for documentation and digitisation.** The project is aimed at saving the rapidly disappearing narrative traditions of these communities. The Langas and Manganiyars are hereditary communities of Muslim musicians residing mostly in western Rajasthan's Jaisalmer and Barmer districts and in Pakistan's Tharparkar and Sanghar districts in Sindh**. The Archives and Research Centre for Ethnomusicology at the American Institute of Indian Studies (AIIS) have taken up a project to digitise the cassette collection of the music of these two communities. Both groups are Muslim, but the Langa's patrons are Muslim Sindhi Sipahis, whereas the Manganiyar's patrons are mainly Hindus.** The **Langa's main traditional instrument is the sindhi sarangi; Manganiyar's is the kamaicha.** Both are bowed stringed instruments with skin membrane sounding boards and many sympathetic strings. Both Langas and Manganiyars sing and play the dholak (double-headed barrel-drum), the kartal (wooded clappers), the morchan (jaws harp), and the ubiquitous harmonium.
- **Hence option (a) is the correct answer.**

Q 68.A

- The Chinese travellers of ancient India mentioned a number of educational institutions. The most famous among them were the Hinayana University of Valabhi and the Mahayana University of Nalanda.
- The term Nalanda means "giver of knowledge". **It was founded by Kumaragupta I during the Gupta period.** It was patronised by his successors and later by Harsha. **Hence, statement 1 is correct.**

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various sizes. Nalanda University was a residential university and education was free including boarding and lodging. It was maintained with the revenue derived from 100 to 200 villages endowed by different rulers.

- Though it was a Mahayana University, different religious subjects like the Vedas, Hinayana doctrine, Sankhya and Yoga philosophies were also taught. In addition to that, general subjects like logic, grammar, astronomy, medicine and art were in the syllabus. **There is evidence that all three Buddhist doctrines—Theravada, Mahayana and Vajrayana—were taught here. Hence, statement 3 is not correct.**
- It attracted students not only from different parts of India but from different countries of the east. Admission was made by means of an entrance examination.
- **Hiuen Tsang travelled around India between the years of 630 and 643 CE, and visited Nalanda first in 637 AD and then again in 642 AD, spending a total of around two years at the monastery. Hence, statement 2 is correct.**
    - He was warmly welcomed in Nalanda where he **received the Indian name of Mokshadeva and studied under the guidance of Shilabhadra,** the venerable head of the institution at the time.
    - He believed that the aim of his arduous overland journey to India had been achieved as in Shilabhadra he had at last found an incomparable teacher to instruct him in Yogachara, a school of thought that had then only partially been transmitted to China.
    - Besides Buddhist studies, the monk also attended courses in grammar, logic, and Sanskrit, and later also lectured at the Mahavihara.

Q 69.A

- To create a robust software product ecosystem the Government has approved the National Policy on Software Products - 2019, which aims to develop India as the global software product hub, driven by innovation, improved commercialisation, sustainable Intellectual Property (IP), promoting technology startups and specialized skill sets.
    - The Policy aims to align with other Government initiatives such as Start-up India, Make in India and Digital India, Skill India etc so as to create Indian Software products Industry of USD ~70-80 billion with direct & indirect employment of ~3.5 million by 2025. **Hence statement 2 is correct.**
- In order to evolve and monitor schemes & programmes for the implementation of this policy, National Software Products Mission will be set up with participation from Government, Academia and Industry.
- **An Indian Software product registry will be created through industry ownership.** This will act as a common pool of Indian Software Products thereby providing a trusted trade environment. **Hence statement 1 is correct.**
- A conducive environment will be created in order to facilitate active participation of software companies in Capital Market.
- A Single Window platform will be established for facilitation of Indian software product industry in fast-tracking legal and regulatory issues regarding (i) import and export and (ii) opening and closure of software product enterprises.
- **A classification system for Indian software products will be evolved through a model HS code.**
- A Centre of Excellence will be set up to promote design and development of software products with industry participation.
- **A national "Talent Accelerator" programme** targeting, 100,000 school and college students, will be initiated for motivating young talent for software product development.
- The registry of Indian software products will be integrated with Government e-market (GeM) and will also provide necessary handholding for marketing support.
- Indian Product Startups / MSMEs will be encouraged to develop solutions for Smart Cities, healthcare, agriculture, e-learning, transport, fin-tech and addressing social challenges, such as, bridging digital divide, gender inequality, empowering the less privileged citizens and divyangjans. A series of hackathons will be organised to identify such startups / MSMEs, who will be suitably rewarded on successful development.
- Special focus to Indian Software Products will be provided in international trade development programmes by:
    - **Integrating Indian software products in India's foreign aid programmes.**
    - Providing opportunities and access under the various market development assistance programmes to showcase innovative products and solutions in important events, exhibitions, trade fairs etc.
    - Setting-up of specialized infrastructure in India and abroad for Software Product development so as to enhance presence of Indian Innovation in global markets.

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this policy over the period of 7 years. Rs 1500 Crore is divided into Software Product Development Fund (SPDF) and Research & Innovation fund.

- **A dedicated Software Product Development Fund (SPDF)** with a corpus of Rs. 1000 Crore will be created in the form of Fund of Funds. SPDF will participate in venture fund **to provide risk capital so as to promote scaling up of market ready Software Products. The fund will fill the gap between the capital requirements of technology and knowledge based software product startup enterprises** and funding available from traditional institutional lenders such as banks.
- A Programme to support **Research and Innovation on Software** Products in Institutes of Higher Learning and Research will be initiated **with a budgetary outlay** of Rs. 500 Crore with participation from Government, Academia and Industry. **Hence statement 3 is not correct.**

Q 70.D

- **15th Edition of Indo - Nepal Joint Military Training, Exercise Surya Kiran between Indian Army and Nepali Army** held from 20 September 2021 at Pithoragarh (UK). During this exercise, an Infantry Battalion from Indian Army and an equivalent strength from Nepali Army shared their experiences gained during the conduct of various counter-insurgency operations over a prolonged period in their respective countries. **Hence pair 3 is not correctly matched**
- **11th Edition of Exercise EKUVERIN between India & Maldives was conducted at Kadhdhoo Island, Maldives from 06 to 19 December 2021.** The exercise enhanced synergy & inter-operability between Armed Forces of both the Nations in terms of understanding transnational terrorism both on land & at sea, conducting Counter Terrorism & Counter Insurgency Operations and sharing best military practices and experiences. **Hence pair 1 is matched correctly**
- **The Indian Army contingent participated in a two-week multinational military exercise named 'ZAPAD 2021' at Nizhny in Russia.** It is one of the **theatre level exercises of the Russian Armed Forces** and will focus primarily on operations against terrorists. Over a dozen countries from Eurasian and South Asian Region will participate in the exercise. **Hence pair 2 is correctly matched**

Q 71.B

- **ESTUARY ECOSYSTEM:** Estuaries are located where river meets the sea. Estuaries are **water bodies where the flow of fresh water from the river mixes with saltwater** transported, by tide, from the ocean. Estuaries are the most productive water bodies in the world. They are located at the lower end of a river and are subject to tidal fluctuations. Estuaries are either once or twice, daily washed by the seawater. **Hence, statement 1 is correct.**
- **Characters**
  - An Estuary is **a semi-enclosed coastal bod**y of water with one or more rivers or streams flowing into it. It has a free connection with the open sea.
  - The complete salinity range from 0-35 ppt is seen from the head (river end) to the mouth (sea end) of an estuary.
  - An estuary has **very little wave action,** so it provides a calm refuge from the open sea. It provides shelter for some of the animals. **Hence, statement 2 is not correct.**
  - It is the **most productive region** as it receives a high amount of nutrients from fresh and marine water.
  - Estuaries are **most heavily populated areas** throughout the world, with about 60% of the world's population living along estuaries and the coast.
  - A tidal bore occurs **along a coast where a river empties into an ocean or sea.** A tidal bore is a strong tide that pushes up the river, against the current. It must have a narrow outlet to the sea. However, the estuary, or place where the river meets the sea, must be wide and flat.
  - **Tidal bore-affected estuaries are rich feeding zones and breeding grounds of several forms of wildlife.** The estuarine zones are the spawning and breeding grounds of several native fish species, while the aeration induced by the tidal bore contributes to the abundant growth of many species of fish and shrimps (for example in the Rokan River, Indonesia). **Hence, statement 3 is correct.**

Q 72.A

- In a total of 146.45 million operational holdings in the country, the highest number of operational holders belonged to Uttar Pradesh (23.82 million) followed by Bihar (16.41 million), Maharashtra (15.29 million), Madhya Pradesh (10.00 million), Karnataka (8.68 million), Andhra Pradesh (8.52 million), Tamil Nadu (7.94 million), Rajasthan (7.66 million), Kerala (7.58 million) etc.

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by Rajasthan (20.87 million ha), followed by Maharashtra (20.51 million ha.), Uttar Pradesh (17.45 million ha.), Madhya Pradesh (15.67 million ha.), Karnataka (11.81 million ha.) etc.

- **Hence option (a) is the correct answer.**

Q 73.C

- "Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions" was published by the **United Nations Environment Programme in association with the Climate and Clean Air Coalition. Hence option (c) is the correct answer.**
- Key findings of the report include:
  - Increasing Concentration of Methane: Methane's atmospheric concentration has more than doubled since pre-industrial times.
    - Second only to carbon dioxide in driving climate change.
    - Methane in the atmosphere reached record levels last year even though CO2 levels dropped during the pandemic.
  - Reducing anthropogenic emissions: Reduction of anthropogenic emissions by 45% would prevent a rise in global warming by up to 0.3 degrees Celsius by 2045.
  - Varying mitigation potential: The mitigation potential varied between countries and regions. For example, China's mitigation potential was best in coal production and livestock, India's in the waste sector.
    - The fossil fuel industry had the greatest potential for low-cost methane cuts.

Q 74.A

- All those receipts of the government which create liability or reduce financial assets are termed as **capital receipts.**
- The main items of capital receipts are as follows:
  - **Loans raised by the government from the public which are called market borrowings.**
  - **Borrowing by the government from the Reserve Bank** and commercial banks and other financial institutions through the sale of treasury bills.
  - Loans received from foreign governments and international organisations.
  - Recoveries of loans granted by the central government.
  - Small savings (**Post-Office Savings Accounts,** National Savings Certificates, etc)
  - Provident funds
  - Net receipts obtained from the sale of shares in Public Sector Undertakings.
- The **Non-tax Revenue** mainly consists of the following:
  - Interest receipts on account of loans by the central government.
  - **Dividends and profits on investments made by the government. Hence option (a) is the correct answer.**
  - Fees and other receipts for services rendered by the government.
  - Cash grants-in-aid from foreign countries and international organisations.

Q 75.A

- **West coasts** of the continents **in tropical and subtropical latitudes** (except close to the equator) **are bordered by cool waters**. Their average temperatures are relatively low with narrow diurnal and annual ranges. There is fog, but generally, the areas are arid. Warm currents flow parallel to the east coasts of the continents in tropical and subtropical latitudes. This results in warm and rainy climates. These areas lie in the western margins of the subtropical anti-cyclones.
- **West coasts** of the continents in the **middle and higher latitudes are bordered** by **warm waters** which cause a distinct marine climate. They are characterized by cool summers and relatively mild winters with a narrow annual range of temperatures. **Hence statement 1 is correct.**
- **The mixing of warm and cold currents** help to replenish the oxygen and favour the growth of **planktons,** the primary food for fish population. The best fishing grounds of the world exist mainly in these mixing zones. **Hence statement 3 is correct.**
- **The Indian Ocean circulation:**
  - In the North Indian Ocean, **there is a complete reversal of the direction of currents between summer and winter**, **due to the changes of monsoon winds**. **Hence statement 2 is not correct.**

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are blown from a south-westerly direction as the South West Monsoon Drift. This is reversed in winter, beginning from December, when the North-East Monsoon blows the currents from the north-east as the North-East Monsoon Drift.

Q 76.C

- Seagrass can easily be confused with marine macroalgae, or seaweed, but there are many important differences between the two.
- **Statement 1 is correct: While seagrasses are considered vascular plants and have roots, stems, and leaves, seaweed is multi-cellular algae and has little or no vascular tissues.** The two differ in reproduction, structure, and how they transport nutrients and dissolved gases.
- The table and diagram below illustrate some of these distinctions.

Feature	Seagrass	Macroalgae (Seaweed)
Number of Species Worldwide	55	5,000-6,000
Reproduction	Have separate sexes; produce flowers, fruits, and seeds	Produce spores
Structure	Evolved from terrestrial plants and have tissues that are specialized for certain tasks. Possess roots, leaves, and underground stems called rhizomes that hold plants in place.	Relatively simple and unspecialized. Holdfast anchors plant to a hard surface; does not possess roots extending below the surface.
Transport/Clarification	Use roots and rhizomes to extract nutrients from the sediment; use leaves for extracting nutrients from the water. Are categorized as vascular, with a network of xylem and phloem that transport nutrients and dissolved gases throughout the plant.	Use diffusion to extract nutrients from the water. Not plants or animals, but protists.

- **Statement 2 is not correct: While the worldwide number of species of Seagrasses is approximately 55, seaweed species vary in the range of 5000-6000.**
- **Statement 3 is not correct: While seagrasses reproduce through production of spores, seaweeds reproduce sexually through flowers, fruits and seeds.**

Q 77.A

- **A fuel cell is a device that generates electricity through an electrochemical reaction.** Fuel cells work like batteries, but they do not run down or need recharging. They produce electricity and heat as long as fuel is supplied. A fuel cell consists of two electrodes—a negative electrode (or anode) and a positive electrode (or cathode)—sandwiched around an electrolyte.
- **It uses a source of hydrogen as fuel but involves no combustion.** With the help of oxygen present in the air, oxidation of hydrogen atoms occur and in the process, electrons are released which flow through an external circuit as an electric current. **Hence, statement 1 is correct.**
- Fuel cell systems are a clean, efficient, reliable, and quiet source of power. Fuel cells do not need to be periodically recharged like batteries, but instead, continue to produce electricity as long as a fuel source is provided. **The byproducts of a fuel cell include heat and water. Hence, statement 2 is not correct.**

Q 78.D

- **There are two major island groups in India –one in the Bay of Bengal and the other in the Arabian Sea**. The Bay of Bengal island groups consist of about 572 islands/islets. These are situated roughly between 6°N-14°N and 92°E -94°E.
- **The two principal groups of islets include Ritchie's archipelago and Labyrinth Island**. The entire group of island is divided into two broad categories – the Andaman in the north and the Nicobar in the south
- **They are separated by a waterbody which is called the Ten-degree channel. Hence statement 3 is correct**

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is correct. However, some smaller islands are volcanic in origin.

- **A barren island, the only active volcano in India, is also situated in the Andaman and Nicobar islands.**
- **These islands receive convectional rainfall and have an equatorial type of vegetation. Hence statement 2 is correct.** The coastal line has some coral deposits and beautiful beaches.

Q 79.A

- The central bank's main risk provision accounts are - **Contingency Fund, Currency and Gold Revaluation Account (CGRA), Investment Revaluation Account Foreign Securities (IRA-FS) and Investment Revaluation Account-Rupee Securities (IRA-RS)**
- Contingency Fund (CF):
  - **This is a specific provision meant for meeting unexpected and unforeseen contingencies, i**ncluding depreciation in the value of securities, **risks arising out of monetary/exchange rate policy operations**, systemic risks and any risk arising on account of the special responsibilities enjoined upon the Reserve Bank. **Hence the statement 1 is correct.**
  - **The fund is maintained and retained by the RBI. Hence statement 2 is not correct.**
- **As per Section 47 of the RBI Act**, profits or surplus of the RBI are to be transferred to the government, after making various contingency provisions, public policy mandates of the RBI, including financial stability considerations.
- **The Currency and Gold Revaluation Account (CGRA)** is maintained by the Reserve Bank to take care of currency risk, interest rate risk and movement in gold prices. Unrealised gains or losses on the valuation of foreign currency assets (FCA) and gold are not taken to the income account but instead accounted for in the CGRA. It can come under pressure if there is an appreciation of the rupee vis-à-vis major currencies or a fall in the price of gold.
- **When CGRA is not sufficient to fully meet exchange losses, it is replenished from the CF.**
- The unrealised gains or losses on revaluation in foreign dated securities are recorded in the **Investment Revaluation Account Foreign Securities (IRA-FS).**
- Similarly, the unrealised gains or losses on revaluation is accounted for in **Investment Revaluation Account-Rupee Securities (IRA-RS).**

Q 80.A

- The Union Ministry of Agriculture and Farmers Welfare December 17, 2021, notified the draft order on 'Prohibition of Streptomycin + Tetracycline in agriculture', which prohibits import, manufacture or formulation of Streptomycin and Tetracycline for use in agriculture from February 1, 2022.
- **The draft order comes growing concerns over antimicrobial resistance observed in various crops, particularly to streptomycin, which is used in the treatment of tuberculosis (TB).** Tetracycline antibiotics find application in the treatment of bacterial infections.
- Streptomycin is a critically important antimicrobial while tetracycline belongs to the class of highly important antimicrobials, according to the World Health Organization.
- Delhi-based non-profit Centre for Science and Environment in 2019 highlighted the practices of antibiotic misuse in the crop sector in India. CSE had recommended these antibiotics should not be used as pesticides, and that they be used under expert supervision only after a bacterial disease has been diagnosed in a crop. It said so underlining the importance of streptomycin use in humans for "previously treated tuberculosis" and for treating multidrug-resistant TB and certain cases of TB meningitis.
- **Hence, option (a) is correct.**

Q 81.B

- In a first of its kind move, the government has come up with an **online employment exchange platform to cater to senior citizens seeking job opportunities.** The **portal developed by the Ministry of Social Justice and Empowerment is named SACRED** (Senior Able Citizens for Re-Employment in Dignity). **Citizens above 60 years of age can register on the portal and find jobs and work opportunities.**
- The Employment Portal will serve not only the senior citizens seeking employment, but also the employers, the Self Help Groups (SHGs), the senior citizens gaining skills, and other agencies or individuals. The portal is shaped on the recommendations of the Empowered Expert Committee (EEC) report on startups for the elderly.
- **Hence option (b) is the correct answer**

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- In order to ensure an Open, Safe & Trusted Internet and accountability of intermediaries including the social media intermediaries to users, the Ministry of Electronics and Information Technology (MeitY) has notified the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**
- These Rules supersede the earlier notified **Information Technology (Intermediaries Guidelines) Rules, 2011.**
- As per the notification made by the Central Government, a social media intermediary having **fifty lakh (five million) registered users in India** shall be considered as a **significant social media intermediary (SSMI). Hence statement 1 is not correct.**
- The rules provide for the establishment of a r**obust grievance redressal mechanism by Intermediaries** (including **appointing a Resident Grievance officer for SSMI**). This will ensure that Intermediaries are responsive to the concerns and grievances of users. **Hence statement 2 is correct.**
- SSMIs in the private messaging space are **only required to enable identification of the first originator upon receiving authorised directions.**
- They do not enjoy the authority to identify such users or information on their own in the absence of appropriate orders.
- Such appropriate orders can only be passed by a competent court or a competent authority under the Information Technology (Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009.
- Such orders can be passed only in relation to certain specified grounds contained in the Rules, such as sovereignty, national security, public order, rape or child abuse, etc. • Such orders shall not be passed when other alternative measures are available.

Q 83.C

- **Gram Nyayalays:**
  - Gram Nyayalayas are aimed at providing inexpensive justice to people in rural areas at their doorsteps.
  - Gram Nyayalayas are to be established for every Panchayat at the intermediate level or a group of contiguous Panchayats at the intermediate level or for a group of contiguous Gram Panchayats.
  - The seat of the Gram Nyayalayas shall be located at the headquarters of the intermediate Panchayat.
  - The Nyayadhikari (Presiding officer) shall be **appointed by the State Government** in consultation with the High Court.
- **Family Courts:**
  - The Family Courts Act, 1984 was enacted to provide for the establishment of Family Courts with a view to promote conciliation and secure speedy settlement of disputes relating to marriage and family affairs.
  - The 1984 Act provides for the establishment of Family Courts by the State Governments in consultation with the High Courts.
  - It makes it obligatory for the State Governments to set up a Family Court in every city or town with a population exceeding one million.
  - **The State Government may, with the concurrence of the High Court, appoint one or more persons to be the Judge or Judges of a Family Court.**
- **Hence option (c) is the correct answer.**

Q 84.B

- **Changwon Declaration on human well being and wetlands:**
  - The Changwon Declaration highlights the positive actions to ensure human well-being and security in the future under the themes - water, climate change, people's health and livelihood, changes in land use, and biological diversity. **Hence pair 1 is correctly matched.**
- **Clydebank Declaration:**
  - The signatories of the Clydebank Declaration will establish zero-emission maritime routes between two or more routes. These routes are called green shipping corridors. The objective is to establish six green corridors by the middle of the decade, that is by 2025. **Hence pair 2 is correctly matched.**
- **Stockholm Convention on persistent organic pollutants (POPs):**
  - Signed in 2001 and effective from May 2004 (Ninety days after the ratification by at least 50 signatory states). It aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).

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- In 1995, the Governing Council of the United Nations Environment Programme (UNEP) called for global action to be taken on POPs, which is defined as "chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment". **Hence pair 3 is not correctly matched.**

Q 85.D

- During the Sultanate period the administrative apparatus was headed by the Sultan who was helped by various nobles. There were various other offices along with the office of the Sultan. Theoretically, there was a **council of Ministers, Majlis-i-Khalwat to assist the Sultan. Hence option (d) is correct.**
- The **religious intellectual group of Muslims** was collectively referred as **Ulema. Hence option (a) is not correct.**
- People of this group managed religious matters and interpreted religious regulations for Sultan. They were also incharge of judicial matters and worked as Qazis at various levels.
- **Amir-i-Akhur** looked after the establishment of horses and **Shahnah-i-fil** looked after the establishment of elephants. **Hence option (c) is not correct.**
- The **Barid-i-Mumalik was the head of the state news gathering and dealt with intelligence**. He had to keep information of all that was happening in the Sultanate. At local level there were barids who used to send regular news concerning the matters of the state to the central office. Apart from barids, another set of reporters also existed who were known as Munihiyan. **Hence option (b) is not correct.**

Q 86.A

- A payments bank is like any other bank, but operating on a smaller scale without involving any credit risk. In simple words, it can carry out most banking operations but can't advance loans or issue credit cards.
- **The proposal for creating payments banks stemmed from the report of the Committee on Comprehensive Financial Services for Small Businesses and Low Income Households (Chairman: Dr. Nachiket Mor) submitted in 2014. Hence, statement 1 is correct.**
- The minimum paid-up equity capital for payments banks shall be Rs. 100 crore, of which the promoter's contribution would be minimum 40 percent of paid-up equity capital for the first 5 years of commencement of the business.
- Payments Banks are licensed by the Reserve Bank of India to further financial inclusion by enabling them to provide
  - small savings/ current accounts below Rs. 1 lakh
  - distribution of mutual funds, insurance products on a non-risk sharing basis and
  - **payments / remittance services to migrant labour workforce,** low income households, small businesses, other unorganised sector entities and other users through high volume-low value transactions in deposits and payments / remittance services using a secured technology-driven environment. **Hence, statement 3 is not correct.**
- The Payments Bank cannot set up subsidiaries to undertake non-banking financial services activities. **Since liquidity is the most important aspect required for such banks they will be bound by the reserve requirement rules of RBI (CRR, SLR etc.). Hence, statement 2 is not correct.**
- Thus, apart from amounts maintained as Cash Reserve Ratio (CRR) with the Reserve Bank on its outside demand and time liabilities, the payments banks will be required to invest a minimum 75 per cent of its "demand deposit balances" in Statutory Liquidity Ratio (SLR) eligible Government securities/treasury bills with maturity up to one year and hold maximum 25 per cent in current and time/fixed deposits with other scheduled commercial banks for operational purposes and liquidity management.

Q 87.D

- **Flagship species**
  - A flagship species is a species **chosen to represent an environmental cause, such as an ecosystem in need of conservation.** These species are chosen for their vulnerability, attractiveness, or distinctiveness in order to engender support and acknowledgment from the public at large. Thus, the concept of a flagship species holds that, by giving publicity to a few key species, the support given to those species will successfully leverage conservation of entire ecosystems are all species contained therein.

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orangutan of Southeast Asia, and the leatherback sea turtle.

- **Keystone species**
  - Keystone species is **a species whose addition to or loss from an ecosystem leads to major changes in abundance or occurrence of at least one other species.** Certain species in an ecosystem are considered more important in determining the presence of many other species in that ecosystem.
  - All top predators (Tiger, Lion, Crocodile, Elephant) are considered as keystone species because it regulates all other animals' population indirectly. Hence top predators are given much consideration in conservation.
  - Key stone species deserve special attention from the conservation point of view. Conservation of keystone species encourages the conservation of all other relevant species associated with this.
  - If keystone species are lost, it will result in the degradation of the whole ecosystem. For example, certain plant species (ebony tree, Indian-laurel) exclusively depends upon bats for their pollination. If the bat population is reduced then regeneration of particular plants becomes more difficult. This changes the vegetation structure which adversely influences the dependant animals.
- **Indicator species**
  - Indicator species is a species **whose presence indicates the presence of a set of other species and whose absence indicates the lack of that entire set of species.**
  - An indicator species is any biological species that defines a trait or characteristic of the environment. For example, a species may delineate an ecoregion or indicate an environmental condition such as a disease outbreak, pollution, species competition, or climate change.
  - Indicator species can be among the most sensitive species in a region and sometimes act as an early warning to monitoring biologists.
  - Many indicator species of the ocean systems are fish, invertebrates, periphyton, macrophytes, and specific species of ocean birds (like the Atlantic Puffin). Amphibian indicates chemicals, global warming, and air pollution. Lichens are indicators of air quality and are sensitive to sulfur dioxide.
- **Foundation species**
  - Foundation species is a dominant primary producer in an ecosystem both in terms of abundance and influence. Example: kelp in kelp forests and corals in coral reefs. **Hence option (d) is the correct answer.**
- **Charismatic megafauna**
  - These are large animal species with widespread popular appeal that environmental activists use **to achieve conservation goals well beyond just those species**. Examples include the Giant Panda, the Bengal Tiger, and the Blue Whale.
- **Umbrella species**
  - Umbrella species is a wide-ranging species whose requirements include those of many other species. The **protection of umbrella species automatically extends protection to other species.** These are species selected for making conservation-related decisions, typically because protecting these species indirectly protects the many other species that make up the ecological community of its habitat.

Q 88.C

- **The 2021 United Nations Climate Change Conference, more commonly referred to as COP26**, was the 26th United Nations Climate Change conference, held at the SEC Centre in Glasgow, Scotland, United Kingdom.
- The participating 197 countries agreed a new deal, known as the **Glasgow Climate Pact, aimed at staving off dangerous climate change**.
  - The pact "Reaffirms the Paris Agreement temperature goal of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels" and "Recognizes that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around midcentury, as well as deep reductions in other greenhouse gases.
- The Glasgow Climate Pact is the first COP treaty to specifically target coal.
  - 197 Signatories committed to accelerate **"the phasedown (not phase out) of unabated coal power"** (meaning power generated without using technology to mitigate carbon emissions) and to bring to an end "inefficient fossil fuel subsidies". **Hence statement 1 is not correct**.

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corridors", zero-emission maritime routes between two or more ports, in an effort to help the shipping sector decarbonize. **Hence statement 2 is not correct.**

- **The new Glasgow Financial Alliance for Net Zero (GFANZ) was established at the COP 26. Hence statement 3 is correct.**
  - Chaired by UN Special Envoy on Climate Action and Finance it brings together leading net-zero initiatives from across the financial system to accelerate the transition to net-zero emissions by 2050 at the latest.
  - Members include major asset owners and managers as well as banks with the power to mobilize trillions of dollars behind the transition to net zero.

Q 89.A

- **AQUATIC ORGANISMS:** The aquatic organisms are classified on the basis of their zone of occurrence and their ability to cross these zones. The organisms (both flora and fauna) in the aquatic ecosystem are unevenly distributed but can be classified on the basis of their life form or location into five groups
- **Neuston:**
  - These are unattached organisms that live at the air-water interface such as floating plants, etc.
  - Some organisms spend most of their lives on top of the air-water interface such as water striders, while others spend most of their time just beneath the air-water interface and obtain most of their food within the water. E.g., beetles and back-swimmers. **Statement 1 is not correct.**
- **Periphyton:**
  - These are organisms that remain attached to stems and leaves of rooted plants or substances emerging above the bottom mud such as sessile algae and their associated group of animals. **Statement 4 is not correct.**
- **Plankton:**
  - This group includes both microscopic plants like algae (phytoplankton) and animals like crustaceans and protozoans (zooplankton) found in all aquatic ecosystems, except certain swift-moving waters.
  - The locomotory power of the planktons is limited so that their distribution is controlled, largely, by currents in the aquatic ecosystems. **Statement 2 is correct.**
- **Nekton:**
  - This group contains animals that are swimmers. The nektons are relatively large and powerful as they have to overcome the water currents.
  - The animals range in size from the swimming insects (about 2 mm long) to the largest animal, the blue whale.
- **Benthos:**
  - The benthic organisms are those found living in the bottom of the water mass. Practically every aquatic ecosystem contains well-developed benthos. **Statement 3 is correct.**

Q 90.D

- **Causes of the 1857 Revolt:**
- **Political Cause:**
  - **Doctrine of Lapse**: It caused suspicion and uneasiness in the minds of almost all ruling princes in India. The right of succession was denied to the Hindu Princes. The guarantee of adoption to the throne "did not extent to any person in whose veins the blood of the founder of the dynasty did not run". In case of disputed interpretation, the decision of the East India Company was binding and that of the Court of Directions final.
    - There was no Supreme Court to give an impartial verdict on questions of right and wrong. While the Panjab, Pegu, Sikkim had been annexed by the 'Right of Conquest', Satara, Jaipur, Sambhalpur, Baghat, Udaipur, Jhansi and Nagpur were annexed by the application of the Doctrine of Lapse. Oudh was annexed on the pretext of " the good of the governed".
  - **The 'absentee sovereigntyship'** of the British rule in India was an equally important political factor which worked on the minds of the Indian people against the British. The Pathans and the Mughals who had conquered India had, in course of time, settled in India and become Indians. The revenues collected from the people were spent this very country. In the case of the British, the Indians felt that they were being ruled from England from a distance of thousands of miles and the country was being drained of her wealth.

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disbanding of Pindaris, Thugs, and irregular soldiers who formed the bulk of the native armies. These people had lived mostly on plunder, and when deprived of the means of livelihood by the British, they formed the nucleus of antisocial elements in different areas. When in 1857, there occurred some disturbances they swelled the ranks of the rebels.

- **Administrative Cause:**
  - The administrative machinery of the East India Company was 'inefficient and insufficient.
  - The land revenue police was most unpopular.
  - Many districts in the newly annexed states were in permanent revolt and military had to be sent to collect the land revenue.
- **Socio-religious causes:**
  - **The activities of Christian missionaries:**
    - One of the aims of the English in Indian was to convert the Indians to Christianity.
    - Major Edwards had openly declared that "the Christianization of India was to be the ultimate end of our continued possession of it."
  - **Religious Disabilities Act, 1856:**
    - It modified Hindu customs.
    - It declared that a change of religion did not debar a son from inheriting the property of his heathen father.
- **Military causes:**
  - In 1856 Canning's government passed the **General Service Enlistment Act** which decreed that all future recruits for the Bengal army would have to give an undertaking to serve anywhere their service might be required by the Government.
    - For Hindus crossing the seas meant loss of caste.
    - Those soldiers who had been sent in the army of invasion of Afghanistan during 1839-42 had not been taken back in the folds of the caste.
  - The privilege of free postage so long enjoyed by the sepoys was withdrawn with the passing of the **Post Office Act of 1854.**
- **Hence option (d) is the correct answer.**

Q 91.A

- Recently, at an industry event, Union Minister of Road Transport and Highways advocated for the introduction of the flex fuel engines in domestic vehicles. An advisory to all carmakers to introduce flex-fuel engines as a part of latest automobile reforms.
- A **'flex-fuel engine' is an internal combustion engine that can run on more than one type of fuel and also a mixture.** Typically, **a blend of petrol and ethanol or methanol is used, and the engine is capable of automatically adjusting for any ratio,** thanks to modifications like a fuel composition sensor and suitable ECU programming. **Flex-fuel engines are capable of running on 100 percent petrol or ethanol. Hence statement 1 is correct**
- The greatest advantage of the flex-fuel vehicles is that they can operate with regular gasoline when alternative fuels are not available or are not economically competitive. **Such Flex Fuel engines are already in operation and use in domestic vehicles in Brazil, USA and Canada at macro level. Hence statement 2 is not correct**

Q 92.B

- The Constitution mandates formation of Metropolitan Planning Committees (MPCs) in **all metropolitan areas** with a **million-plus population.**
  - **Article 243 ZE of Part IX A** provides for establishment of the Metropolitan Planning Committee (MPC). **Hence statement 1 is correct.**
- MPCs are envisioned to ensure integrated planning for the entire metropolitan area, and are responsible for the preparation of draft development plans, synthesising priorities set by local authorities, State and Central governments.
- The 74th Constitution Amendment Act has provided that not less than **two thirds of the members of MPC shall be elected** by and from amongst, the elected members of the Municipalities and Chairpersons of the Panchayats in the Metropolitan area in proportion to the ratio between the population of the Municipalities and of the Panchayats in that area. **Hence statement 2 is correct.**
  - It will have representation of the Government of India and the Government of the State and of such organisations and institutions as may be deemed necessary for carrying out the assigned functions.

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officers of the concerned Departments of State Governments at the Secretary level, experts, members from various organisations / agencies / para statals / corporations / NGOs working in the respective metropolitan areas.
    - Besides, MPC may have permanent special invitees from the elected representatives namely Member of Parliament / Legislative Assembly / Legislative Council / Mayor of the Corporation concern with metropolitan area.
- **It submits the development plan to the State Government. Hence statement 3 is not correct.**

Q 93.C

- **The Twelfth Plan commenced at a time (2012-17) when the global economy was going through a second financial crisis, precipitated by the sovereign debt problems of the Eurozone which erupted in the last year of the Eleventh Plan.**
- The crisis affected all countries including India. Our growth slowed down to 6.2 per cent in 2011-12 and the deceleration continued into the first year of the Twelfth Plan, when the economy is estimated to have grown by only 5 per cent
- The Twelfth Plan, therefore, emphasizes that our first priority must be to **bring the economy back to rapid growth while ensuring that the growth is both inclusive and sustainable.** The broad vision and aspirations which the Twelfth Plan seeks to fulfil are reflected in the subtitle: **'Faster, Sustainable, and More Inclusive Growth'. Hence statement 1 is correct.**
- **The plan was not based on Harrod-Domar model, it was the first five year plan (1951-56) which was based on this model.**
- **The Harrod-Domar model is a Keynesian model of economic growth.** It is used in development economics to explain an economy's growth rate in terms of the level of saving and capital. It suggests that there is no natural reason for an economy to have balanced growth. **The model was developed independently by Roy F. Harrod and Evsey Domar in 1946.**
- **A major new initiative taken in the Twelfth Plan, to improve implementation of the Centrally Sponsored Schemes is to rationalise the number of the CSS, reducing them from 142 to 66, and also permitting greater flexibility in the guidelines. Hence statement 2 is correct.**
- Recognising the fact that "one size fits all" national guidelines do not take into account the characteristics of different States, which justifies a differentiated approach, a new system has been introduced with two major changes.

Q 94.C

- **Clive's solution of the political tangle of Bengal was the setting up of the infamous Dual System.** During the rule of Mughal Empire, Subahdar and Diwan were the two principal officers of the Central Government. **The Subahdar looked after the Nizamat functions i.e., military defence, police and administration of criminal justice, while the Diwan was the chief financial officer and in charge of revenue affairs.** The system of Dual Government was introduced in Bengal by Robert Clive of British East India Company. It lasted from 1765 to 1772. **Hence statement 1 is not correct.**
- **Under this system, Diwani powers were carried out by the Company and administrative power was vested with the Nawab. But in reality Dual system of Government proved a sham, for the East India Company both Nizamat as well as Diwani powers.** The East India Company became the real master of Bengal from 1765 (after the Battle of Buxar).
    - The firman issued by the Shah Alam granted the Diwani functions to the Company in return for an annual payment of 26 lakh rupees.
    - The Company also controlled Nizamat powers through the right to nominate the Deputy Subahdar.
    - By this arrangement Nawab practically surrendered the Nizamat functions. **Hence statement 2 is not correct.**
- **The system was abolished by Warren Hastings in 1772 and Bengal was brought under direct control of the British and the Nawabs remained as the mere pensioners of the East India Company. Hence statement 3 is correct.**

Q 95.C

- Quantum Technology is based on the principles of Quantum mechanics developed in the early 20th century to describe nature at the scale of atoms and elementary particles. Using quantum superposition, a set of unbreakable codes or super-speedy information processing, quantum computers are able to mimic several classical computers working in parallel.
- Applications of Quantum Technology:

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to strengthening and transmitting quantum signals in a large network.
    - Research: It can help in solving some of the fundamental questions in physics related to gravity, black hole etc.
    - Disaster Management: The development of quantum sensors will lead to more powerful instruments for measuring electric and magnetic fields both in our environment and inside our bodies. The local variations in gravitation to find minerals, water or embedded pipelines and **advanced warning systems for earthquakes and volcanic eruptions.**
    - Pharmaceutical: Quantum computing could reduce the time frame of the discovery of new molecules and related processes to a few days from the present 10-year slog that scientists put in. **Tackling chronic diseases like cancer, Alzheimer's and heart ailments is a big possibility of the technology.**
    - **Hence, option (c) is correct.**

Q 96.C

- Consultative committees are attached to various ministries / departments of the Central Government.
- They consist of members of both the Houses of Parliament.
- **The Minister / Minister of State in charge of the Ministry concerned acts as the chairman of the consultative committee of that ministry. Hence statement 2 is correct.**
- These committees provide a forum for informal discussions between the ministers and the members of Parliament on policies and programmes of the government and the manner of their implementation.
- **These committees are constituted by the Ministry of Parliamentary Affairs. Hence statement 1 is not correct.**
    - The guidelines regarding the composition, functions and procedures of these committees are formulated by this Ministry. The Ministry also makes arrangements for holding their meetings both during the session and the inter- session period of Parliament.
- The membership of these committees is voluntary and is left to the choice of the members and the leaders of their parties.
    - The maximum membership of a committee is 30 and the minimum is 10.
- These committees are normally constituted after the **new Lok Sabha is constituted, after General Elections for the Lok Sabha.** In other words, these committees shall stand dissolved upon dissolution of every Lok Sabha and shall be reconstituted upon constitution of each Lok Sabha. **Hence statement 3 is not correct.**

Q 97.C

- On 27 June 1855 Dadabhai Naoroji left for London to join the business as a partner in Cama & Co., the first Indian company to be established in London.
- Four years later he started his own firm Naoroji & Co. Later he became a Professor of Gujarati at University College London.
- In 1867 he founded the **East India Association in London, one of the predecessor organisations of the Indian National Congress** with the aim of putting across the Indian point of view before the British public. **Hence statement 1 is correct.**
- In 1874 he was appointed the Dewan of Baroda and a year later, on account of differences with the Maharaja and the Resident, he resigned from the Dewanship.
- In July 1875 he was elected a Member of the Municipal Corporation, Bombay.
- In 1876 he resigned and left for London.
- He was appointed as Justice of the Peace in 1883, **started a newspaper called 'Voice of India'** and was elected to the Bombay Municipal Corporation for the second time. **Hence statement 3 is correct.**
- In August 1885 he joined the Bombay Legislative Council at the invitation of the Governor, Lord Reay.
- On 31 January 1885, when the Bombay Presidency Association came into being, he was elected as one of its Vice - Presidents. At the end of the same year, he took a leading part in the founding of the Indian National Congress and became **its President thrice in 1886, 1893 and 1906. Hence statement 2 is not correct.**
- In 1902 he was elected as a Member of the Liberal Party in the House of Commons, representing Central Finsbury, he was the first British Indian MP.
- A big step forward was taken at the **Congress session held at Calcutta (1906)** under the presidentship of Dadabhai Naoroji, where it was declared that the goal of the **Indian National Congress was "self-government or swaraj like the United Kingdom or the colonies" of Australia or Canada.**

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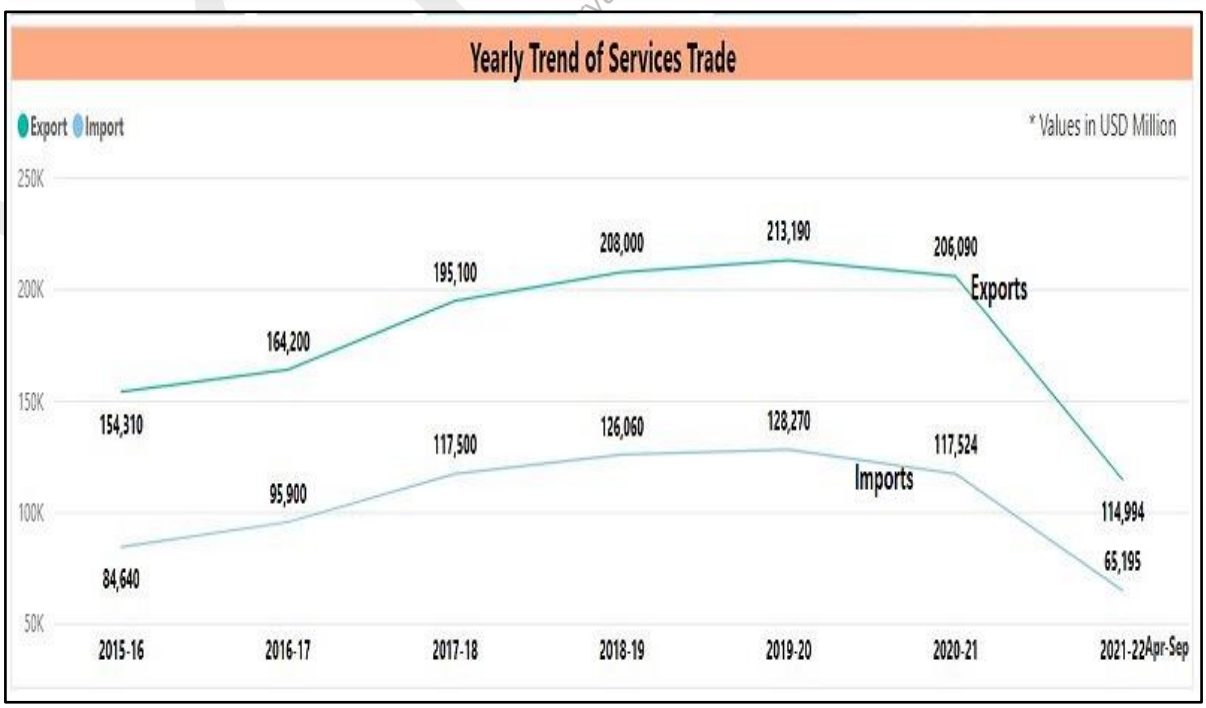
- The balance of payments includes both the current account and capital account. The current account includes a nation's net trade in goods and services, its net earnings on cross-border investments, and its net transfer payments.
- DEVELOPMENTS IN INDIA'S BALANCE OF PAYMENTS (BOP) (2015-20)
    - During the period, India's merchandise imports increased from $381 Bn in 2015-16 to $514 Bn in 2018-19 which later declined to $394 Bn in 2020-21. Also during the same time, merchandise exports increased from $262 Bn in 2015-16 to 330 Bn in 2018-19 which further declined to $291 Bn in 2020-21. **Hence, statement 1 is not correct.**
    - The invisible balance or balance of trade on services is that part of the balance of trade that refers to services and other products that do not result in the transfer of physical objects. India's export of services has shown an increasing trend from 2015-20, whereas imports have also shown an increase during 2015-20 with a trade surplus in the above period. The trade surplus has shown fluctuations in the past five years. **Hence, statement 2 is correct.**



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- River Yamuna, a major tributary of the river Ganges, originates from the Yamunotri glacier near Banderpoonch peaks in the Mussourie range of the lower Himalayas in district Uttarkashi (Uttarakhand).
- The catchment of the Yamuna river system covers parts of Uttar Pradesh, Uttarakhand, Himachal Pradesh, Haryana, Rajasthan, Madhya Pradesh & Delhi. **Hence statement 1 is correct.**
- Its right bank tributaries are Chambal, Ken, Betwa, Sind, etc. whereas left bank tributaries are Hindan, Rind, Sengar, Varun, etc. **Hence statement 2 is not correct.**
- Son is a major right-bank tributary of Ganga and not of Yamuna. **Hence statement 3 is not correct.**

Q 100.D

- **The Indian gold coin is a part of the Gold Monetisation Programme**. The coin is the **first ever national gold coin minted in India**
- Ithas the National Emblem of Ashok Chakra engraved on one side and Mahatma Gandhi on the other side. The Indian Gold coin & bullion is unique in many aspects and carries advanced anti-counterfeit features and tamper proof packaging.
- **Indian Gold Coin is the first-ever national Gold Coin with advanced security features. It is also the only BIS hallmarked Gold coin in India. Hence statement 1 is correct.**
- The Central Government recently approved several amendments to the Indian Gold Coin Scheme.
- The change in rules is expected to popularise Indian Gold Coins and make them directly available to buyers through multiple marketing channels, **including online e-commerce platform and through MMTC, jewellers, banks, India Post etc. Hence statement 2 is correct.**
- The Government has allowed the **Security Printing and Minting Corporation of India (SPMCIL) to mint Indian Gold Coin (IGC)** in smaller denominations of **1 gram and 2 grams**. Before the amendment, IGC was minted in denominations of 5, 10 and 20 grams only. **Hence statement 3 is correct.**
- Currently, IGC is manufactured in **24 carat of 999 fineness only**. As per the new rules, now IGC will be made available in 2**4 carat of both 999 and 995 purity.**
- **SPMCIL Mumbai** has been provided flexibility to **mint commemorative gold coins,** Order Gold Coins for gold holders like temples/trusts, etc., introduce variants of IGC, etc. on special occasions.

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